

PRACTICAL
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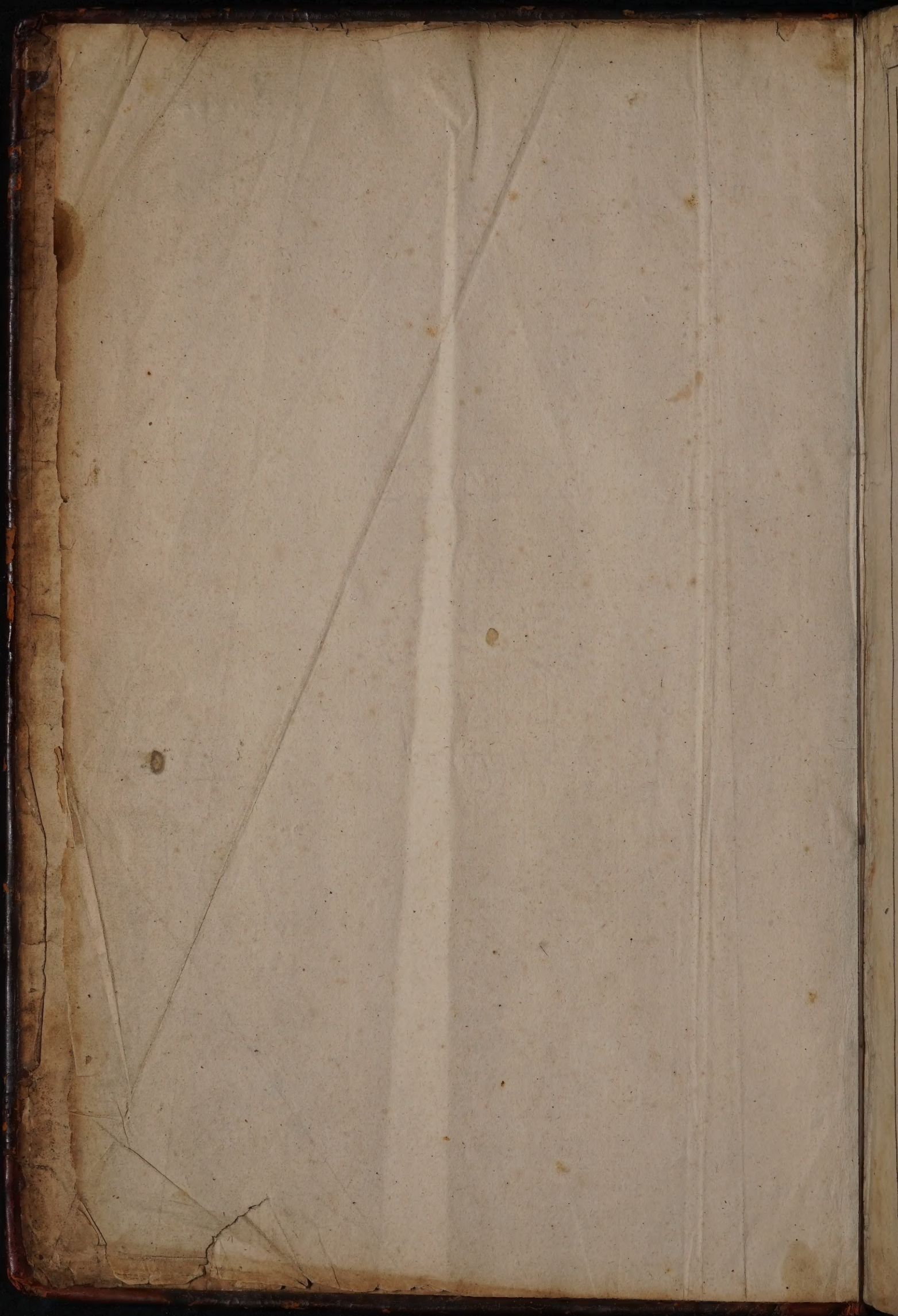
BONET

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A
GUIDE
TO THE
PRACTICAL PHYSICIAN:

SHEWING,

From the most Approved Authors, both Ancient and Modern,
The truest and safest way of Curing all DISEASES,

INTERNAL and EXTERNAL,
Whether by *Medicine, Surgery, or Diet.*

Lately Published in Latin by *Theoph. Bonet*, M. D.

And now Rendred into English, with the Subtraction of some things of less moment, a more exact Relation of several others, and an Addition of many considerable Cases, Rules and Means of Cure, that were omitted by the aforesaid Author.

A Work very Necessary and Useful for all Practitioners in Physick.

To which is added,

An APPENDIX
CONCERNING
The Office of a Physician,

By the same AUTHOR.

LONDON,

Printed for *Thomas Fleisher* Bookseller, at the *Angel and Crown*
in *St. Paul's Church-yard*, MDCLXXXIV.

24297





TO THE MOST
ILLUSTRIOUS and NOBLE LORD,
EDWARD Lord HIDE,
VICOUNT CORNBURY, &c.

I Present to Your Lordship a Mercury, not Him indeed who sends Souls to the Infernal Shades, or is a Guide of the way that leads thither; but one who, as the Poet speaks, *Animas Orco Evocat*, conducts them back again from thence: Or, more truly, a Guardian of humane Health, and a stout and trusty Vanquisher of the Diseases which commonly oppress Mankind. Nor is this a thing that is new to Your Lordship, as being not onely initiated, but very well instructed in the Wisdom of the Ancients: You are not ignorant that the Egyptians, that is, the Guides of the Greeks, and the first Mystagogues of all the Learning and Religion of the Ancients, have deliver'd to us all their Inventions, and the bright Lights of all Arts and Sciences wherewith that Nation shone heretofore, under the Name of Mercury: But why do I recount those ancient and (I had almost said) anile things? Permit me (with the favour of my good Genius) under the Statue of this Mercury to offer unto Your Lordship, not my Eloquence, such as became either the Egyptian or the Grecian Hermes, but a Devout Mind, and a Respect that is owing on so many Accounts. My hope is encouraged both by Your singular Humanity which I have been an Eye-witness of in several Instances, and also your free and generous Disposition, and (which ought not to be past by in silence) the pleasant propension of Your Mind towards our City, which you have declared abundantly, by taking up Your Abode for some Years with us. All the Citizens, (from the highest to the lowest) think themselves happy in having enjoy'd Your Presence, and they admire Your large, acute and ingenious Wit, Your piercing Judgment, (ripe before Your years) the Brisk-

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THE EPISTLE DEDICATORY.

ness of Your Memory, the quick and ready Motions of Your Mind, Your swift Knowledge of things, Your Eloquent Invention, yea, and Natures prodigality in bestowing her gifts upon You, who hath given You a comely Body, and such whose Strength exceeds Your Age, as being not yet Twenty years old: By virtue of which Strength You far exceed all others in such Horse and Foot Exercises as become a Nobleman. The most Illustrious Earl of Clarendon, Your Father, having observed in You a Genius growing up to all Sublime things, and even from Your Childhood a great Soul in a little Body, well knowing, that Instruction promotes inbred Virtue, chose for Your Tutor the most Noble and Excellent Mr. Hamilton, of an Ancient and Honourable Family, who, by his own Virtue and Learning, increasing the Glory derived from his Ancestours, hath not onely obliged all the Muses in the strictest familiarity, but hath also taken a full view of Machaon's Tents, and entred into the Sacristie of Medicin: Through his Tutorage there shine forth in You all Virtues, and a remarkable Piety, whereof the Holy Temples are Witnesses, which You are used to frequent: Your Liberality, and a Mind prone to pity are Witnesses: By Your Goodness You love to please all; You are affable to all with a Countenance composed betwixt Gravity and Courtesie. I omit now all the other Ornaments which surround You on every hand, Your Family adorn'd with the Affinity of Kings; Your Grandfather heretofore not onely the Mercury, but the Pallas of Britain, the President of both Wisdom and Eloquence, and a Faithfull Ambassadour to his Prince: Nor do I here speak of Your Father, whose Integrity of heart, incredible Humanity, singular Learning, in almost all kinds of Sciences, unwearied Study in cultivating the elegancy of Learned Antiquity, and in Collecting an excellent Library of Books, are much extolled by all such as come hither now and then from Your Fortunate Islands: The same persons greatly magnifie Your Uncle, who has been heretofore honoured with the most splendid Embassies, and whom Britain being joyfull, and presaging well of her Affairs, does respect and honour amongst the Chiefest Ministers of State: But the office of my Mercury is not to enter into these large Fields; 'Twill be Your part, my Noble Lord, henceforward to receive him, though rude of Speech, or destin'd for the promiscuous use of all, into Your Patronage and Favour. Farewell.

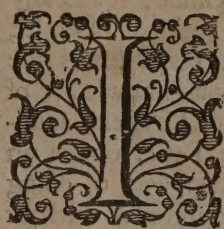
Genev. 4. 1d. Jan.
Ann. 1682.

Your Honour's

Most humble and obedient Servant,

Theoph. Bonet.

THE Authour's Preface TO THE READER.



It is told us by the Ancients, That formerly *Mercury's* Statue was placed in the Cross-ways, to guide Men in the right way, and to reduce them that were out: The same Fate does sometime attend both the Traveller and the Physician; for both of them

— between two parting Ways oft stand,
To which to turn, uncertain which the Hand.

Ofttimes there is occasion for a Guide in ones Journey, who may shew a Man which way he must follow: This is often right-forward, and yet it leads out of the Way: for there is such a weakness in Humane Understanding, that it is blind in things as plain as the Nose on a Man's Face, much more may it stumble in the dark. "In practising of Physick, says *Galen*, Men must take care that they doe nothing rashly; for, besides that negligence herein creates no small danger, it brings a Man into great disgrace. For, as he says, *Comment. 1. Aph. 1.* Bricks, Loam, Wood, Stones, Tiles and Hides, are not the subject matter of the Art of Physick, as they are of Trades, in which Men may try any thing without offence to any Man, and may make Experiments for Invention, and Confirmation of Theorems, as Carpenters do in Wood, and Curriers in Leather: For if a piece of Wood or Leather be spoiled in Working, no Man is endangered by it. But to try Experiments in Humane Bodies, which have not been approved by Experience, wants not danger, since the Issue of rash Experimenting is the destruction of the Man. Therefore *Hippocrates 2. Prorrh.* bids the Physician observe a Man's Mind, his custom, and the strength of his Body. Besides, *Similitudes in Diseases* do often impose on good Physicians, and create Errours and Difficulties, according to *Hippocrates, lib. 6. Epidem. 8.* that is, Artificial Conjectures, whereon we rely much in the Cure of Diseases, and in the knowledge of the whole Art, do often fail: And, as *Galen* says, "Oftentimes Reason imagines many things with it self, which Experience afterwards refutes. Therefore a small Errour, says *Averroes*, occasions infinite mistakes. The *Methodus Medendi*, or Method of Curing, derives its Name from a Way, which, by Indications, shews which way we must take, and gives us the advantage of avoiding all Errour. *Hieronymus Capivaccius* formerly set so much by this, that in his opinion, a Physician needed nothing else in practising of Physick: They say, that a *Polander*, who had taken his Degree at *Padua*, being to return to his own Country, requested him to reveal some of his secret Medicines to him; and that he gave him this Answer, *Reade my Method, and you will have my Secrets*: But how strict an Observer *Capivaccius* was of his own Method, his *Praxis Medica*, and other of his Works do shew; where he takes notice of many Errours, made manifest to him by practice and experience, not revealed by Reason. *Galen* himself, who first shewed the Way, and was the first contriver of the *Methodus Medendi*, forbids a Man to rest in Universals, but

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but to descend to Particulars. "For who can hope to search out the manifold variety of "Precepts, without constant Practice? says *Hippocrates*, *l. de Præception*. Who therefore thinks the Art is long, because the Indications must be taken onely from the Specifick Disease. "To think, says *Galen*, *3. meth. med. c. 3.* that there is any one general "Cure for all Men, as some stupid Methodists do think, is a piece of the greatest madness in the World. A Physician's business lies in Particulars, and by particular Experiences a solid knowledge of the Art is acquired. *Seneca* says, "The way to a Science or "Art by Precepts is long, by Examples, short and effectual.

It is easie indeed to know, what *Rheubarb* is, what *Burning*, what *Cutting*; but in Practice, how they may be accommodated to Use, when *Purging*, when *Burning*, when *Cutting* is convenient, is not so obvious; nor can it so easily be understood, For What, When and How they must be used, because of the variety of Circumstances, and the divers changes which Mens Bodies incur. "To know what must be done is no great matter, but by what means you may doe it, to know this is all the Skill, says *Galen*, *lib. 6. Method. med. cap. 2.*

Yea, and several Mens Idiosyncrasie is various; it has something hidden, which is manifest to no Senses, can be found out by no tokens. This Difficulty so tormented *Galen*, that it extorted this Expression from him; *If I were but able to discern every Man's Idiosyncrasie, I should think my self as good a Physician, as I imagine Æsculapius, or Apollo to have been.* Truly he that intends to practise Physick, supported onely by Method, is like him, that would try to travel the whole World over, by the guidance of one Geographical Map; or him, that would sail to the *Indies* onely by the Compass, without any other Sea-Chart. Many impassable places occur, Woods, Mountains, *Scylla* and *Charybdis*, which stop the course, and indanger Men. Nor will a Man, destitute of a Guide, make any farther progress on his way, than if he went on one Leg: A Man has occasion of both, who will proceed as he should; of Reason, which in Method, as in a Map, shews the Indications, and what ends we must aim at. There must be a previous knowledge of this, by the direction whereof, they that run through the broad field of Physick, administer all things, dispose them, reduce the wandering mind into the Path, out of an inextricable and confused multitude of things, and lay open the hidden way of doing things: If this be wanting, all Physick is uncertain, wavering and doubtfull: Without this, Medicines are like a Sword in a Mad-Man's hand, which would otherwise prove to be the hand of GOD, if they were dextrously used, as *Hierophilus* said of old: This shews whether a Disease should be opposed, or no; If any thing must be done, What, How much, When, Where, and in What manner: This teaches to vary the Cure, according to the nature of the Disease, variety of Causes, urgency of invading Symptoms, and the diversity of the afflicted parts; yea, it teaches how to cure one and the same Disease in divers Individuals, and grieved parts, several ways. But however it is, that Reason dictates these and the like things; yet Experience must be called in to its assistance, being in order of Nature first, for Reason was found after Physick, not Physick after Reason, which owes its Being to Experience. The dignity of Reason is great, yet it is lame, unless there be the other Leg, Experience, supported by the Senses, under which what things do fall, are not subject to Mistake, but they put all things out of doubt. Yet Reason is necessary in these things, which the Senses cannot reach. "For of such things, as are contrary in Quality, there is Method; but of such things as are contrary in their whole Substance there is no Method, but they were all found out by Experience, says *Galen*, *lib. ad Thrasib.* But if Reason confirm things, that are found by Experience, they are of undoubted truth. And if these two contradict one the other, we must rather adhere to Experience; but not to every Experience neither: For there is a difference between *πειρα* and *ἐμπειρία*, between Experience and Empiricism. For what is more common with some Physicians, than, before they scarce understand any thing, to appeal to their own Experience, and to cite it for good Authority? This often holds good in two or three things, and fails in others; for Experience does not depend upon this one or the other case, but upon the repeated act of many Examples. He that relies upon any one or the other Example, may be called an Empirick, or an Experimentator, if he practise Physick upon Experiments, not true Experience. "Experience is not to be trusted, says *Galen*, *3 Aph. 10.* Because, though we see the same thing often, we cannot say it will be always so. Nor ought a Man to make Physical Aphorisms of things that he has seen but once or twice. Certain Experience must not be expected, unless from a Learned, Skillfull, exactly Judicious Physician, and one who has often travelled the Way of Physick.

to the READER.

Tears Men expert make.

"Experience, according to *Galen*, *libro de optima Secta*, is the comprehension and memory of that, which is seen frequently, and in the same manner. "Nor can Physicians, says *Cicero*, *1. de Offic.* though they do understand the rules of Art, atchieve any thing praise-worthy, without Practice and Experience. And to this, Prudence is highly requisite (the Companion usually of Old Age, says the same *de Senect.* as Rashness is of Youth) which, according to *Aristotle*, *1. ad Nicomachum* 8. not onely considers that which is absolutely and universally Good, but also that which is good for this or that particular person. For a Physician's Consideration, is not onely of τὸν κατὰ τὸν, but τὸν κατὰ τὸν, not onely of Generals, but of Particulars.

For we should always remember this of *Seneca*; "What uses to be done, What ought to be done, may in general be given in charge and written: Such Advice may be given not onely to people absent, but to Posterity. This other, When a thing should be done, or in What manner, no Man can advise at a distance; deliberation must be taken with the things themselves.

But how can that Art well proceed by the conduct of Reason alone, which by the Ancients was reckoned among Conjectural ones, that is, among such as do not always, and every where obtain their end, how expert soever the Artists are, and practice never so exactly according to Rule? "It has not, says *Hippocrates*, *lib. de Arte*. as other Arts have, things that are tractable, for its Matter: A Physicians subject is Man's Body, not altogether so obedient, but rebellious and intractable. Many things happen, which render the event of the Art uncertain and dubious, and therefore make the Art it self Conjectural. So according to *Celsus*, *l. 2. de re Medica*. "In Physick, what ought to be done is not perpetual, yet something, which it is convenient to follow, is perpetual. When a Physician is thus in the Mire, *Hippocrates*, *lib. de Præcept.* that Physician will not behave himself unbecomingly, who, when his Patient's case seems dangerous, and he is blinded chiefly by unskillfulness, calls other Physicians, that by friendly conference the Patient's case may be stated aright, and they may together give their assistance to the cure: For in the Violence and Constancy of affliction, when the Disease increases, through want of Advice, the Opportunity of many things, fit for the present occasion, is slip. In truth, the Consultations of Physicians are not uselefs and supervacaneous, seeing in all Plenty there is Want, says *Hippocrates*: For how erudite and experienced soever the Physician is, besides, though he have a Wood of Medicines; yet he is but a Man, he may be deceived, err, slip and stumble sometimes on the plainest ground, because of the incomprehensible variety of Particulars, about which he is conversant. And we say commonly, *In a Physician's Work two Eyes see better than one*, as *Zwingerus* expresses himself, *comment. in lib. cit.* Because, even the Variety of things requires some Animadversions, it is good for every one to know, what he must most avoid and when, as *Celsus* says very well.

Now either a Man's Fellows are taken into Consultation, or such as have committed to Writing what in their Practice of Physick they have observed to be singular about their particular Patients, and do offer to us the Knowledge of those Means, whereby this or the other Man has obtained his health; and this not in a single Disease always, but in complicate, contrary or opposite Diseases, by which very thing General Rules are put in Use in a particular Subject. Among them who have been eminently laborious in this Service *Ludovicus Septalius* of *Millain* is chief, he published his *Cautiones & Animadversiones Medicæ*, wherein, as he himself says, the Manners, as it were, and the daily Discipline of the Art are contained: A Piece of that Excellency, that *Johannes Rhodius*, in *Cista Medicâ Thomæ Bartholini*, advises every one, when he begins to practise Physick, not onely to reade it over and over, but by degrees to enlarge it with other Mens and his own Observations. I, being moved with this Advice, did ten years ago publish some Medical Cautions and Animadversions, taken out of *Gulielmus Ballonius* his Works, digested in the same order as those of *Septalius*, by the Title of *Pharus Medicorum*, quite omitted in this present Work, because another Edition, larger by a third part, and of a better Print, is ready every moment for the Press. I left out *Septalius* also himself, and the worthy *Rhodius*, who, to fill up the Vacuities in *Septalius*, published his Collections and Notes, taken out of the Treasury of several Physicians. He is sparing of his Words, rich in Sense and Matter, comprehending Cases in short Periods, and onely touching the Heads of them; which Cases, I thought it the best way, to describe at large, as they occur in Authours, leaving him in a manner

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a manner untouched; that, I might not seem willing to rob them of a Book of immense use, who love short Treatises. What things I had gathered in my reading of abundance of Authours, I gave them the form of an *Index*, and digested them in an alphabetical order, after the example of those famous Men, *Job. Andr. Schmitzius in suo Medicinæ Practicæ compendio*, and *Dr. Thomas Burnet in his Thesaurus Medicus Practicus*, not according to the usual placing of Diseases according to the parts of Man's Body, to the end the Physician may the sooner find what he looks for. The Work recommends it self for its usefulness and novelty: For the Inventions of modern Anatomists have given a great deal of Light to the *Methodus Medendi*, and have made it far plainer, out of whose Treasury I have brought a great many things hither. Certainly no small Light has been given to it, since the Circulation of the Blood has been discovered, since the Thoracick Ducts, Lymphatick Vessels, Salival Glands, &c. have been found. Add to these the Industry of Chymists, which has furnished us with far more safe, wholesome and gratefull Medicines. "Chymistry, the most liberal Dispenser of practical Felicity, does adorn, bless and ennoble Mankind with many Benefits, says *Rolsinccius, Dissertat. Chymicorum prima*. I have compiled this Work out of many, ascribing to every one his own. The Observations, that have no Authour's Name affixt to them, crept hither out of my own Diary. Some perhaps may blame me, that I have made this up onely in a manner of borrowed things. But if many Authours be perused, it will appear, that they plowed with another Man's Heifer. Some blame *Mercatus* his voluminous Works, as made up of several; For he, as *Julius Guastavinus, lib. 2. locor. in Med. select.* observes, transcribed many things out of *Jacotius, Fernelius, Salius*, with very few Alterations, and all out of *Brudus Lusitanus*. *Lazarus Riverius* compiled his Practice out of *Sennertus, Thomas à Veiga, Salius, Varandæus, Zecchius, Job. Hartmannus, Enchiridion Medicum Practicum*, and others.

Some have given their helping hand to the like Work, by shewing the Mistakes of Physicians, as *Cardan, Sanctorius, Lazarus à Soto, Mercatus*, out of whom *Augerius Ferrerius* took a Volume of *Castigationes Medicæ*, assuming them to himself, I reckoned it a piece of Justice to render to every Man his own, nor indeed could the Design well otherwise be finished. *Maximus in Cedrenus* gives his judgment concerning Writers of Books. *Books*, says he, are commonly written to these ends, either for a Man's own Memory, or for others Good, or for both: Sometimes also to hurt others, either to shew ones Wit, or because Necessity so requires. Certainly they deserve Commendation, who study their own and other Mens Benefit, and the publick Good; as they often pay for their Rashness, who, gaping after Glory, expose themselves to the uncertain Lottery of other Mens judgments. But they deserve best from Learning, who keep nothing from others which they have learned by Experience, but make it publick; and who being informed by long Practice, both what ought to be done, and what avoided, do either here and there insert it in their Works, or put it out in particular Tracts. None of us is good at all things, this Man is good at Explication, that Man at Correction, another at Consultation. Let every Man contribute what he is able, and give his Assistance by his Purse, Pains or Advice. I have cast in my Mite, in which I have bestowed nothing on Pomp, all on Use; for which if you shall esteem this fit, it shall never repent me of my Pains. Farewell.

THE Translatour's Preface TO THE READER.

THOUGH the Authour himself has already address'd you; yet his Modesty not allowing him to give this Book of his the due Character of so learned and usefull a Work, because his own; Justice bids me say something farther on that behalf. I have seen a little in the Practice of Physick, and I highly value Bonetus his Judgment both in making Choice of such a Design, and in the Prosecution of it, for the Advancement of Practicall Knowledge. His Design is, to take out of all Classick Authours in the Art of Physick, from Hippocrates, the Father of the Faculty, (who lived some hundreds of years before the Physician of Souls was incarnate,) down to his Contemporaries and Himself, in the year of the Incarnation 1682. all that does directly tend to the saving of sick Mens lives. So that in this one Volume you have the Substance (I may safely say it) of the Medical Library, which has been about two Thousand years in collecting: For there is not one Authour of Note, who hath left ought to Posterity in all that time; but here Bonetus presents you with what is material for Practice out of him. So that, besides the vast Charge which a Man would be put to in furnishing himself with so huge a Library as he must of necessity have to compile so great a Work; and with the Charge, besides the great difficulty to procure some Books for any Money, (for several, that he quotes, I know to be both dear and scarce; and he often cites Passages out of a Manuscript of Sir Theodore de Mayerne's, our English Esculapius of his time, which never yet has been printed;) I say, besides the Charge and Difficulty in getting Books, he saves that Physician, who has them, a great deal of time in perusing them, to find what is pertinent to the Case he would be resolv'd in. For if you understand Latine, you may find the Name of your Disease Alphabetically in that Tongue, and there is your Case, without any farther trouble: Whereas, should you have recourse to the Authours themselves, it might take you up some Hours time, to meet with what you may here find, in fewer parts of a Minute. So much for his Design.

But in all this Variety, (he so prosecutes his Design) there is no Confusion. At first view, indeed, one might look upon it as a Medley: But any one who understands what Method is, may see, that if each particular Case, or at least every one of a great number of them, were but converted into an Universal Axiome, all the general Rules of the Method of Physick might be had in their order: For so, if you consult the Contents of each Title, you will find them. And when each Case will afford an Aphorism, and all those Aphorisms make a completer Body of Physick than has ever yet been written, I think I cannot sufficiently admire the Management of his Design.

And after the Authour has done them well, what can I say for my self in the name of those that assisted in the Translation, but that we hope we have given you the Authour's Meaning in plain English? But farther, we must advertise you, that we have omitted several of Zacutus Lusitanus his Cases, because, being miraculous, our Faith could not reach them, unless the
Authour's

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Author's Credit had been less suspected: We have omitted some others, which we apprehended to be but of small moment; especially such as had the Reason of them founded on obsolete Hypotheses. And, because the Author had been long in collecting this Treasury, he transcribed the Passages from Authours (as he met with them in the perusal, or in his own Practice) under their proper Titles, without any Method in them, and so they were printed, onely the Contents were methodical: But in the Translation we have put the Cases into Method, according to the Contents. And, in lieu of those Passages that were omitted, we have put many new ones in, as, particularly, much out of Septalius, whom Bonetus so highly commends, but left him and some others of the same nature out of his Work, because (as he tells you in his own Preface) he would not spoil the Sale of so good Books. And since this Learned Age is daily productive of Excellent Books, we have added much out of some that came out between the Publication of the Latin and this Translation, as, We have given you an Epitome of Ten Rhine of the Moxa, which shews the Cure of the Gout, and of most Diseases in the East Indies by Burning with Moxa, and the way how we in England may make it; therein also we give you Sir William Temple's Experience of it in the Low Countries, when he resided there in a Publick Capacity from His MAJESTY of Great Britain. We give you also much of Dr. Sydenham's Tracts, that came out since the publishing of Bonetus. Besides, we have added much out of Willis of the Scurvy, much out of Glisson and his Partners, and Whistler of the Rickets, none of which, except Willis, were ever in English; and many Passages out of other Authours, most Latine, some English.

But, besides all these things, We have given you all the best Receipts and Medicines, which were most relied on in Practice by the most Physicians in all Ages to this time, for particular Diseases. These we translated out of Waltherus his Sylva Medica, which came out two or three years before Bonetus, a Work of vast Pains and Charge, collected out of some Hundreds of Authours, wherein he gives us an account of most Authours that have written on any Disease, and withall he sets down what Medicines those Authours in their Practice principally relied on. So that generally, with the Causes, you have means wherewithall to answer them, and perform the Cures: Besides that, in the nineteenth Book, you have the Reasons of the Operations of Medicines.

Now if both Bonetus and Waltherus be so highly valued among the Learned (who understand the Languages of those Authours, out of whose Works these two Excellent Persons compiled theirs) that, though so lately published, they are already become scarce; What Esteem Bonetus and Waltherus in English should bear, among English Readers, that would understand Physick, I leave to any Man to judge. For not one hundredth part of the Authours, which Bonetus and Waltherus quoted, ever were, or are ever like to be, in the English Tongue: So that for this very Reason, the Translation may deserve a higher Esteem among mere English, than the Original among the Learned; since these can understand the Principal Authours, without an Interpreter; the other cannot, and so for want of one, were it not for this Book, might live in Ignorance of many Excellent things.

The Author, Bonetus, is an ancient Dr. of Physick in Geneva, a Man of great and successful Practice, and of infinite Learning, as other of his Works, but this especially, do shew. He dedicated this to a Noble Personage of this Land, as you may see before; And how can we more gratefully acknowledge his kindness, than by letting our Countrey-men understand, how generous it is to all Men in his publishing so usefull a Work in Latine, and in particular to our Countrey-men in his dedicating it to a Noble Earl of our Nation?

Now because the Alphabetical Disposition of the Diseases, according to the Latin Tongue, will not be serviceable to the English Reader, we have made an English Index, whereby you may find the Disease which you want in the Book; and then, run but over the Contents, and you will meet with your Case.

And, after all, I appeal to the Learned, Whether these two Books (both of which are valued by such) when they are made One, be not a Book of the greatest use in Physick, that has ever been published in any Tongue, and much more in English. Farewell.

A GUIDE

A GUIDE TO The Practical Physician.

BOOK I.

Of Diseases beginning with the Letter A.

Abortus, or Miscarriage.

The Contents.

- It ought not to be procured for the remedying of any diseases the woman with child is troubled withall. I.*
How a simple voiding of blood may be distinguish'd from it. II.
The distinction of its causes according to the times that the woman is gone with child. III.
The symptoms that use to accompany it, require the providence of the Physician. IV.
How the concomitant Symptoms may be cured. V.
A prevention of it by frequent blood-letting. VI, VII.
Plasters apply'd are not to be kept on long. VIII.
When there is occasion for Adstringents, and when for Looseners. IX.
An instant Abortion is not always to be hasten'd, from the example of one that was prevented. X.
When it is imminent, medicines that are hot must be mix'd with Adstringents. XI.
Sometimes Adstringents are onely to be applied to the Loins. XII.
Remedies applied below are safer than those taken in at the mouth. XIII.
Wine to be abstain'd from. XIV.
Medicines.

I. **D**AILY Observation shews, that Women with child are subject to many and great distempers, both Chronical and Acute, which are made more dangerous, and are harder to cure, from their being in that condition, especially Acute diseases, as Fevers, Pleurisies, &c. Hippocrates says, that it is deadly for a woman with child to be seiz'd upon by any acute disease. And according to Galen there is a double danger; one from the Fever's killing the Child; another from the thin diet that is requisite for acute Diseases, but is injurious to Women with Child; as also from the necessity of the greater remedies, such as bleeding and purging. But some

rash men, if they see their Patient in great danger, advise the procuring of Abortion. Now Abortion is more painfull and dangerous than a natural birth, from the violent divulsion of the unripe Fetus, whence very many die, some escape, but not without grievous symptoms: And the danger is the greater, if the Fetus be pretty big, (as if the Woman be gone seven or eight months) or if the Woman herself be feeble and weak, or if the labour under dangerous acute Distempers. Even healthfull Women never miscarry without danger: some retain the Fetus so pertinaciously, that no medicines will make them miscarry. Wherefore their advice is pernicious that counsel the procuring of Abortion in acute Diseases, 1. Because in many it is not easily done; 2. It cannot be done but by dangerous Remedies, and those often repeated, which aggravate and heighten acute Diseases; 3. Nor is it safe, seeing Abortion itself is a dangerous and deadly affection, as experience shews: for by the aphorism above cited, it is deadly to a Woman with Child to be taken with an acute Disease, from the Fever, the thin diet, and the danger of Abortion: now 'tis bad to add affliction to the afflicted: the Mother often perishes by destroying the Fetus with such Remedies. 4. Even a natural Birth seldom gives any relief to several Diseases; much less will Abortion cure any Disease, especially such as is acute, no, it will rather make it worse, unless the Fetus be already dead, for then indeed 'tis necessary to exclude it. Yet we must not abstain from necessary helps, as bleeding and purging, which often prevent Miscarriage; and if it sometimes follow upon the use of them, 'tis not to be imputed to the Remedies being duly administered, but to the sharpness of the Distemper that is too hard for all Remedies, or to the weakness of the Mother, or lastly to the death or debility of the Fetus. Hippocrates in his oath promises, that he will give no Woman any Medicine to procure Abortion: 'Tis the part of a Physician not to destroy, but to preserve as much as he can.

B

II. Midwives.

II. Midwives ought to be very heedfull; for it sometimes happens, that a Woman with Child voids by her Womb much blood, and imprudent Midwives think that she has miscarried, which yet is not so, but onely a Miscarriage is imminent; which whilst it is, it ought to be prevented by Adstringents; but if it be actually made, then we must help by Looseners. Wherefore Midwives ought to examine diligently the matter that comes forth, whether it be blood, or flesh, or geniture, or the *Fetus*: for by washing what comes forth in water one may easily discern whether there have been truly an Abortion or not.

Capivacc.
Præf. l. 4. c. 8.

III. *Serapio's* opinion is to be noted: He thinks if a Miscarriage happen in the first or second month, that it is caused by wind, or a preposterous agitation of the Mother, breaking the slender fibres; if it happen in the middle months, that slimy humours which loosen the *acetabula* (or saucers) of the Womb, are the cause of it; and lastly if it happen in the last months, that it is commonly caused either from want of nourishment, or straitness of the Womb.

IV. The Wife of N. miscarrying, she first voided the Secondines with much blood, which brought her very low and weak: the flux of blood abating, the next day she excluded the *Fetus* that was four months old: after this she seem'd to grow better and cleans'd indifferently well: onely what came away was very stinking and cadaverous. On the seventh day she was taken with a high Fever, and voided the *placenta* (or womb-liver) which stunk extremely, and was full of black-blood; whence she recovered by degrees. The Lady N. being four months gone with Child, miscarried, excluding the *Fetus* with the membranes; whence she was thought to be clear of all. But afterwards she fell into a high Fever, with frequent horrors and swoonings: then she voided most fetid matter with clods of blood and pieces of flesh. On the seventh day she excluded the *placenta* which stunk very much; whereupon she grew to be better and recovered.

These two Histories teach that the purgations of the Womb, when they have a cadaverous smell, for the most part signifie that some portion of the Secondines is staid behind in the Womb.

River. obs.
cent. 1. obs. 61.

V. When after Miscarriage part of the *Placenta* hath remain'd in the Womb, and a continual flux of Blood for some months hath accompanied it; I have observed it successfully expelled, and the Patient restored by three ounces of the following Decoction taken twice or thrice a day. Take of the Root of Bistort two Drachms; of the leaves of Marjoram, Penniroyal each one Handfull; Boyl them in Water and White Wine of each alike as much as is sufficient. In twenty ounces of the Decoction clarified dissolve of Syrup of Mugwort two ounces, of Cinamon Water half an ounce. For by virtue of this a piece of the *Placenta* as big as ones Fist was voided, and all further Flux of Blood was stopt and cured.

Franc. de le
Boe Sylv.
Præf. Med. l.
3. c. 6. sect.
119.

VI. A Woman having suffered three Miscarriages one after another at different times of her gestation (or going with Child) being now gone but two months, had great pains about her Navel and Loins, which threatned an Abortion. Two plasters being applied, one to her Loins, and another to her Navel (made of the Plaster for fractures and dislocations) she was somewhat helped for a while, but afterwards her pains returned. I being called, observing the Woman to be young and sanguine, order her to be let blood; whereupon in a few hours she was freed from her pains and fear of Miscarriage. Her blood was very ferous. For prevention I give her a drachm of Rhubarb in powder with Broth, to be repeated once a week for a month. These symptoms had happened just at the time when she us'd to have her Menstrues when she was not with Child. Again in her third month the same symptoms return'd, and were pre-

sently removed by bleeding. In like manner in the fourth, fifth, sixth, seventh and eighth months the same symptoms returning, we opened a vein each time, whereby she was forthwith freed of them. The last time she was let blood, was eight days before the beginning of the ninth month, with the same effect; and at the end of the ninth month she brought forth a live Son in good plight but a little pale.

Idem centur.
1. obs. 53.

VII. That which *Hippocrates* writes is not every way true, That a Woman with Child miscarries if she be let blood; unless perhaps he understand it of such as have but little blood, or are weakly. Many plethorick Women that used often to miscarry, have come to retain the *Fetus* even to the ninth month by breathing a Vein. If the superfluous blood be not taken from such Women, they either miscarry, the mouths of the Vessels being unlocked by the too great abundance of blood; or else the Child grows so big that the Mother cannot be safely deliver'd of it. To such, repeated blood-letting is very profitable after the second month, or rather from the fourth to the seventh. ¶ It is very necessary to examine those things that have happen'd formerly. For when one Medicine sometime yields no relief, it will be the best way to try others. When I once saw a Woman very like to miscarry that was five months gone with Child, and had five times miscarried before; considering, first, that adstringent Remedies, both internal and topical (that had been administred at other times by other Physicians) had done her no good, and secondly, that she was very full of blood, I order'd her to be let blood in the Arm, and not in the Foot, lest Abortion should have been caused; and in the ninth month she was safely brought to bed of a living and lively Son.

D. Panarol.
Pentec. 1.
obs. 10.

VIII. Concerning the Plasters that use to be apply'd, this is to be noted, that they must not lie long on at a time, but must now and then be removed: for otherwise by lying too long on the Loins they heat the Kidneys so that a Dysury or heat of Urine is caused, or Stones and Gravel are bred therein, or sometimes pissing of blood follows.

River. præf.
l. 15. c. 17.

IX. In a Miscarriage it is chiefly to be observed, whether the *Fetus* be actually expell'd, or there is onely fear that it will be. For when it is actually excluded we must, with *Avicen*, abstain from Adstringents and use Looseners, lest, which often happens, the Membranes or naughty excrements be left and staid in the Womb, whence the Woman will certainly perish. For this reason *Avicen* dislikes Adstringents, and propounds a suffumigation of bdellium, hyssop, origanum and mustard, whereby both the exclusion of the *fetus* is help'd, and the excrements are happily purged. If the child be not dead nor as yet expell'd, but an abortion is imminent, and the *fetus* retreats, then it is very convenient to use adstringents, by the help whereof it comes to pass that abortion is prevented and the child preserved.

Capivacc. l. 4.
c. 8.
Heurn. de m.
m. c. 7.

X. A woman in the thirteenth week after conception, helping to brew, and unwarily taking up a full pail, had almost miscarried, the membranes being broken and the embryo making its way forth. A Mountebank being by chance present, and casting about how to help this disaster, advised to put the *fetus* up again forthwith into its place by the hand: Laying the woman therefore with her thighs high and her head low, the midwife very nimbly with her hand thrust in the *Embryo* that was coming forth, and presently after the operation laid the mother in her bed, that the *fetus* being put up again might fix in its former seat; yet her *lochia* flow'd for three days. The same Mountebank perswaded the woman to have her husband lie with her, that the broken membrane might be generated anew. Hence the *fetus* being retain'd, was born at its full time, and is still alive.

Thom. Bar.
chol. cent. 4.
hist. 57.

XI. When

Heurn. l. 2.
XI. When there is not so very imminent danger of miscarriage, binding plasters ought not to be apply'd to the belly, lest they intercept the passion of the Womb; but let them be laid on the loins and *Os sacrum*.

Idem.
XII. Have a care to mix some hot things with adstringents and strengtheners, lest the womb be enervated; add mastick, mint, wormwood.

Idem.
XIII. It is observable, that those remedies are safer which are administered to the lower parts, than those that are taken in by the mouth, especially if a putrid fever be present, for this will be increased by the use of adstringents.

Hartman. Pr. Chymiat. factus.
XIV. Wine must not be drunk, for it expells the

Medicines especially made use of by eminent Physicians.

Jul. Cels. Baricellus Horu-lus gemialis p. 308.

1. A piece of wood of the Medlar Tree hung about the neck of Women with child, preserves them from Miscarriage.

Jul. Cels. Claudius Empyr. rational. de Abortu & cura gravidarum.

2. I use this with good success, and as a secret; Take of Perl 1 drachm, of the Fragments of pretious Stones half a scruple, of red Coral 1 scruple, of Lignum Aloes, black Pepper, each 7 grains. Mix them with Sugar dissolved in Mint Water, make them into Trochiscs, whereof take two drachms at a time.

Pet. Forest. l. 2. obs. med. 66.

3. Let the Stone that is found in the womb, or heart, or guts of Hinds be worn for an Amulet: for it is very efficacious to retain the Child.

Hartman prax. chymiat.

4. The juice of a Craw-fish bruised, given in good Wine once or twice a Month, will not suffer the child to come before its time; unless it be forced by external Violence.

Jo. Heurnius de morb. mulier. c. 7.

5. This Medicine was among the Secrets of a certain Italian Physician; Take of Bloudstone, white Frankincense, each half an ounce, of Mastick, Ladanum, each 1 ounce, of Sumack 2 drachms, of Galbanum half an ounce, of Pine Resin what is sufficient. Make a Cerecloth, which she must wear on her belly and the *Os sacrum*.

Domin. Leo art. med. l. 3. c. 6.

6. The Skin of a Hedgehog burnt and drunk in Wine doth by a natural property help those that miscarry through weakness of the retentive Faculty.

Lud. Merc. de puer. & Nativ. affect. l. 4. c. 1. de Abortu.

7. In Abortion by reason of the laxity of the Ligaments caused by moisture, I know that sweating with a Decoction of China Root, or Sulphurous Bathes is excellent good.

Hier. Merc. rial. concil. tot. de Abortu.

8. This Cerecloth will be very proper, which I have often known doe good. Take of Bloudstone, Eaglestone, each half an ounce, white Frankincense, Mastick, Ladanum, each 1 ounce, Sumach 3 drachms, Galbanum half an ounce, Resin of Pine what is sufficient. Make a Cerecloth, which may be kept on till the seventh Month after conception do come, then it must be left off. It must be laid on the Loins on each side, leaving the back-bone bare, nor must it be changed, till it have stuck on 15 days.

River. prax. med. c. de Abortu.

9. The two following Remedies are accounted a Secret, and are thought most certainly to keep the Child, if they be used before the Child be severed from the *Cotyledones*; Take of Gold Leaves No xii, of burnt Ivory 1 drachm, 3 Tradles of Eggs not addle. Mix them well, till the Gold be divided into very small pieces; afterwards dissolve them in half a glass of White Wine, take it for three days in the morning. And at the same time apply this Plaster; Take of *Olibanum* powdered 2 ounces, Whites of Eggs No v. Stir them together over the fire, always keeping stirring, that they run not on a lump, add a little Turpentine, that they may not stick too much. Then take it up with Tow, and apply it to the Navel as hot as she can endure it, twice a day morning and evening for three days.

10. Sennertus advises the wearing of an Eaglestone, or a stone found in the Womb of an Hind, under the Armpits.

11. In Abortion and Flux of Blood from the Womb; Take of Mastick, white Frankincense, each half a drachm, of Dragons blood in gum, Myrtle-berries, Bole Armenick, each 1 scruple. Make it into Powder; take of it 1 drachm, stuff it into a Date, when you have taken out the stone; wrap it in paper, dip it in Claret Wine, roast it in Ashes; and then eat it. This I have learned by Experience, is an efficacious Remedy in keeping the Child.

Reinerus Solenander concil. med. 14.

12. A Plaster of Venice Treacle 4 ounces applied to the Belly is good to preserve the Child.

Jo. Walarum

13. This Cataplasim strengthens exceedingly when the Child begins to stir. Take of the crum of a household loaf 2 pounds, flowers of Roman Chamæmil 1 handfull, Mastick 2 drachms, Nutmeggs No iij. Cloves half an ounce; cut them into a sufficient quantity of Malmsey Wine, add a little Rose Vinegar. Boyl them over a gentle fire to the consistence of a Pultes, which may be applied actually hot, folded in a cloth, to the bottom of the Belly.

Abscessus, or an Imposthume.

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I. a. **A**N Ulcer left from an inward Abscess is clearly and fully cured by taking for some continuance *Antimonium diaphoreticum*, *Bezoardicum minerale*, or any other more effectual and fixed medicine made of Antimony; whose Elixir, Magistery, or quintessence (if any such be) will perform things wonderful, although they seem incredible to most, not only in curing this malady which is dangerous and hard to be cur'd, but also other like that are sometimes found in any bowel.

Franc. Sylvius usprax. med. c. 53. l. 1.

I. b. **A**vicen. says, 3. 4. tract. 1. cap. 29. Defer not to open an abscess that is suppurated, for many mischiefs flow from matter kept too long in the part. But Guido in his Treatise of Imposthumes, bids us tarry till Nature attempt to burst them; for he says, that opening which is made by Nature, is better than that made by Art: for this latter uses to breed an immoderate quantity of matter, and creates foulness in ulcers.

B 2

But

But unless you understand *Guido* of Imposthumes seising upon the inward parts, his doctrine will hardly agree with that of the best Physicians. Indeed that opening of Imposthumes which Nature makes, is without pain, and she chuses a better place for it than the Surgeon: Yet the proposition is not to be taken universally; for if the aperture be deferred so long in all cases, many and irreparable mischiefs follow, namely corruption of the bone, infecting the skin with a green colour, and a slower return to health.

Severinus.

II. It is the opinion of the most skillfull, that Tumours ought not to be opened till they are thoroughly suppurated, because otherwise the part is in danger of mortification, that humour being crude which Nature endeavours to turn into the form of Pus: And also such hasty opening will encrease the pain especially, which will cause a new conflux of humours. But this Rule admits of Exceptions: 1. where the native heat is weak, and there is fear lest the violence of the pain, or want of sleep bring a mortification on the part, before all the humour put on the form of matter. Therefore *Celsus* lib. 7. cap. 2. says, *If the matter be ripe, in the arm-pits and groins we must seldom cut: as neither whereforever there is but a small boy; nor lastly, when the malady is but just under the skin or in the top of the flesh, unless the weakness of the Patient compell us to make haste.* *Rhazes* confirms this 3 continent. cap. 2. 2. Section is to be made if there be that plenty of matter in the abscess that Nature cannot conquer. *Avicenna*, 3. 4. tract. 1. cap. 27. 3. When the matter is thick, seated deep, and is wide at the bottom but narrow toward the surface. (See *Avicenna* in the forecited place.) 4. If the member begin to be mortified, *Avicenna* ibid. cap. 25. 5. When the Imposthume is malignant: for an evil quality oppresses Nature, unless you make timely incision. 6. When it is in the neighbourhood of a principal member: for the matter being pent in annoys it with a foul vapour, with fear of recurring. 7. If it be about the Joints; because the matter being detained eats into the ligaments. 8. When it is upon the bones, nerves, tendons. So *Hippocrates* lib. 2. de morbis, *Those which happen near the fingers, are to be opened before they are perfectly ripe; lest they proceed to corrode and perforate the bone.* For the fingers, that are bloodless, small, remote from the fountain of heat, are easily tainted with corruption, because they make but small resistance. Therefore *Celsus* is not to be heard, who says, lib. 7. cap. 2. *When an abscess happens among the nerves, the utmost ripeness is to be carried for, which may extenuate the skin and join the pus to it, to find it the nearer.* So *Hippocrates* says of abscesses seated on the perineum (or between the genitals or fundament) in lib. de fistulis, *When any such tubercle shall begin to rise, cut it forthwith while it is yet crude, before the suppuration reach to the straight gut.* 9. If it be in glandulous parts, for these are subject to malignant putrefactions, and it makes little matter if such ignoble parts be a little mangled.

III. *Celsus* cap. 2. lib. 7. bids open them with a knife: *If the malady be deep, it is to be considered whether that place be nervous or no: for if it be without nerves, it ought to be opened with a red hot iron; but if nerves be near, fire is not proper: In these there is danger lest either the nerves be distended, or the member be weakened; but it is necessary to use a penknife.* But *Albucasis* lib. de canteris, orders the aperture to be made with a cautery; because by this means an imminent hemorrhagie is prevented, and also the part is secured from bad symptoms, which use to follow the puncture of a Nerve, if a penknife be used. Fire certainly (according to *Hippocrates*) is an enemy to the nerves, namely if the impression of it be deep; otherwise it strengthens the parts that it reaches to.

IV. A Souldier being wounded in the breast bled nothing for seven days: by the advice of a Surgeon a Plaster being applied to the wound, brought forth a great quantity of matter. Another was very ill of a Tumour that was suppurated, which not being

opened in time as it ought, the Patient was in danger of his life, the pus being pent in and hid; but we drew it out by the help of the following Plaster. *Take of new Resin of the Pine, clear and fragrant, one pound, of the oil of Bay, and Turpentine, of each two ounces, gum Elemi four ounces.* The resin and gum must first be so long in the vessel you melt them in, as till they are mixed, and afterwards add the turpentine and oil: let them all boil again; and at length strain them through a thick linen cloth; spread a little of this upon leather, and make a plaster to be applied to the part; change it once a day in winter and twice in summer, and you will admire the effect. Cut two or three long holes in the middle of it, that the matter which it draws may the better flow out.

P. Pachecq. in obseru. River. communicat. obs. 54.

V. They are in an error, who cut an Imposthume that is full of matter and hard, and let it all run out at once; they ought, for the asswaging of the pain, onely to let some part of it to go forth. For concocted pus when it is left in, deterges and cuts the matter which makes the hardness, and dissolves it. No topical Medicine is of that efficacy in taking away the hardness of an inflammation as pus is. Moreover when all the pus is evacuated, the humours often grow so hard and scirrhus, that they become incurable, and can be mastered neither by Resolvents nor Emollients: not by the former, because they consume what's thin, whence the remainder waxes hard like a stone; nor by the latter, because an hard humour ought to be cut and attenuated to the smallest particles, which cannot be done by external Emollients, but by the pus it self that touches the stubborn humour: for pus is the nearest efficient and of the same species, and alone can cut and attenuate it.

Sanctor. meth. 7. 15. c. 9.

VI. Because for the most part in the opening of Abscesses I find one Surgeon to chuse and extoll the Lancet, another a potential Cautery, I will explain the matter in a few words. A potential Cautery has this convenience, that it does not affright faint-hearted Patients, nor is very painful to those that are afraid of pain, especially if you make use of the famed remedies of this day: for Lime mixed with Holland Soap eats deep enough into the flesh, and much more gently than the holoserick Corrosive of *Paracelsus*; but it has these inconveniences, 1. That as the skin and body is more or less firm, it corrodes sometimes far deeper than is needfull: for I have found by experience that in one it corroded the skin and muscles even to the cavity of the belly; and in another it hurt in an incurable manner the process of the peritoneum, and the seminal vessels contained in it. 2. This corrosive extends it self also lengthways and breadthways farther than you desire, especially if it be to be laid on under the arm-pits, in the groins or joints; for as soon as it grows warm it begins to spread about, and will matter but little your defensive Plaster. 3. It needs some hours before it can perfectly finish its operation; yet more time is requisite in one body than in another: But the humour will not always permit of this leisure, especially if it be malignant. 4. The Eschar that it causes, does not presently fall off; so that if you would have the humours to issue forth out of hand you must use the Lancet for all it: Be as circumspect as you will, you cannot avoid these inconveniences. On the contrary the Lancet has these inconveniences, That many Patients are afraid of it, as if it caused pain; but the fear is to be prevented by not speaking of it, and indeed the pain is of no great moment. In the mean time you have these benefits by the Lancet: 1. By it you may make the aperture as long and deep as the malady and your curiosity require. 2. You have the matter quickly, and the Patient is relieved. 3. The matter that remains and which is not yet concocted, will be speedilier promoted towards concoction, by assisting Nature with fit Medicines as well internal as external. 4. And thus it will come to pass that you

you shall not have a long continued gleeing: for if a gleeing once begin, you may be sure that the fault is yours. If you desire a reason take this: Almost all Tumours that shew themselves behind the ears, in the neck, arm-pits and groins, arise from hardened glands, and from preternatural and very penetrating humours; All these kernels are clad with a proper coat, which being hurt by a Lancet or Cathartic Medicines, a gleeing necessarily follows: for no gland, when its coat is opened can preserve either it self or its humours: and this gleeing or dripping continues so long as till the hole in the coat be cured, or the whole gland be vanished and consumed.

P. Barbet.
chirurg. part.
2. cap. 17.

VII. Those are in an error that though the Abscesses be large, rais'd up copped under the skin, and situated in places that are least subject to an afflux of humours, do always content themselves with one simple section, forbearing from many and compound, as if every one should not be treated in a peculiar manner, and as if great ones should be treated like small ones, and mortified or unconcocted ones like those which have raised up the skin and are become copped. Let them consult *Celsus*, *Pautus* and *Avicen*, who have appointed different manners of dissection, and shewn which are necessary in such or such cases.

Severin. me.
dic. eff. p. 93.

VIII. The ignorance therefore of some is to be noted here, who pretend that Nature rejoices in the proper covering of the parts, which if it be taken off, the heat will not so well preserve its strength. The vanity of this superstitious providence is thus shewn: 'Tis true that Nature takes care for preserving the parts with a covering, but that is when they are sound and entire; for she intends to preserve such, and not corrupt parts. For the rind of a rotten Pomegranate covers and preserves all the rotten pulp and seeds: Now shall the rind be kept whole, to the end that the faultiness may be increased, and nothing be pared or opened? In like manner if we will not touch the skin with our knives for fear of uncovering the evil, we nourish and increase it. Thus while I have taken care of ulcerous persons in the Hospitals, when I have laid open fresh ulcers that had burst of their own accord, I have often found the tendons rotting and corrupting under them, though the ulcers seem'd not worth speaking of. Which ought to persuade us, as soon as the skin waxes soft with the malady, to cut it open, and apply such remedies as are fit for the purpose.

Severin. ibid.

IX. *Aquapendent* advises, that in cutting an Imposthume we make not the section so large, as that afterwards the skin can hardly be agglutinated to the muscles that lie under it, from whence a difficult motion of the Muscles may happen. But this caution is either to no purpose, or it has this sense, That the incision should not reach the Muscles also: For though it might happen that as they heal, the skin and they might grow together, yet however the motion of the Muscles might by that means be prejudic'd and not be so certain: for the skin always yields; and therefore he seems somewhat fearfull in cutting. Just as he was also superstitious in curing of a venereal *Bubo*, when he admonishes not to thrust in the knife too deep, because if the glands were wounded, death would presently follow, &c. I speak not this that I would have a man butcher'd, but neither on the other hand would I be content with pricking him; for that does not please me at all. It has happened to many (when a slight incision has been made of large sinuous abscesses) what *Hippocrates* 1 *Epid.* 6. writes of one that died languishing of a sinuous Ulcer, *If there had been a large incision made into it seasonably, he might have been saved.*

Idem. ibid.

X. Nor do I commend their advice, that with a cold moderation of mind doe the business by Causticks: For in these there are many things that may be condemned. The first is an inconvenience that the vir-

tue of the Caustick is not onely extended lengthways of the member, according to the desired form, but spreads it self also broadways; whence it is that it causes cruel pains and a great inflammation (which ought carefully to be avoided) in the parts, not onely in those to which the Caustick is applied, but in those next to them. Secondly, by reason the Eschar is long a falling off, and the parts that are laid bare are slowly restor'd, they doe not so much good as is expected from them. But cutting if it be skillfully performed, afflicts both less and a shorter while, and presently brings the desired help: and by cutting the skin in a line, it does no prejudice on either side.

Idem
ibid. p. 94.

XI. It is to be observed, that Tumours which suppurate slowly grow not copped, nor rise much outward: Therefore you must not wait for a head before you lance them.

Severinus
eff. chir.
p. 94.

XII. A young man going down *Mont Genis* and slipping on a sudden, fell upon his back, the hilt of his sword lighting under his short ribs and left kidney, and bruising his Loins very much. In which place a little after there began a great pain, with various symptoms, but without any sensible fever. The part affected was not black and blue, nor swelled, but very smooth and plain. A great quantity of humours from the whole body had flowed to the left muscle called *Psoas*, and being there pent in made an Abscess. A certain Physician thinking him Nephritical, gave him many things against the Stone. But being brought to a Surgeon who not long before had cured one in the same condition, he was told by him that there was matter shut up in the part which must have vent given to it; otherwise he would be in great danger if the Abscess should break inwards and the pus should be poured forth into the *Abdomen*. The young man committed himself to this Surgeon, whose first care was, that the matter, which was all over the Loins, should be drawn to such a place (by applying powerfull drawers) as where there were few large vessels, and the instruments of motion might be least hurt in the operation. Which after he thought he had obtained, from the Patient's sense of pain upon pressing a fit place, he forthwith made a wound on the left side of the fourth *Vertebra* of the Loins with a red hot knife, as deep as the length of ones forefinger (from the palm) as one might guess by the tent that was afterward put in. Then notwithstanding its depth he put his two fingers into the same wound to make it the wider, that the matter might flow the more plentifully out of it. But a little moderating the evacuation, the Surgeon put in it a silver pipe, which being besmeared with purging and deterging ointments, he used for some months; and at length the wound was skinn'd over, without any *filula* or *sinus* in it. *Eab. Hildan. cent. 1. observ. 63.* The same periton advises, in such deep wounds and ulcers as are near some internal cavity, as the Chest, or lower belly, to abstain wholly from injections that are made with a Syringe, lest some part of the injection go into the cavity, where it might be the cause of grievous symptoms with the danger of the Patient.

XIII. I saw an unmarried Woman forty years old, labouring under an Imposthume behind her left ear. About the fourteenth day of the Disease, when it was grown to the bigness of ones Fist, and the Matter was fully ripe, but retain'd too long through the toughness of the skin, it made its way downwards. When I was called, I found the Imposthume broke of it self some hours before, which run little or nothing; but a few days after the Woman died, when she had a Fever, Fainting and other Symptoms: Hence it appears that in Imposthumes of this kind, whether they be in the Emunstories or near them, we must not stay till they break of themselves, which this History confirms; ¶ There was a Boy three years old, who had an Imposthume about his right shoulder, the matter whereof when it was more than

B 3 enough

Fab. Hild.
cent. hist. 39.
c. 81.

enough digested, and the lancing of it denied, the swelling sunk by little and little, and fell by degrees into the lower belly and Genitals, where having extinguished the innate heat it produced a Gangrene. ¶ I saw almost the like case Anno 1668 in the Village Couffise in the Canton of Bern near Grandison. The Reverend Mr. Bourgeois Pastor of the Church, a full bodied man, who fared well, and omitted one Autumn his accustomed blood-letting, whereby he used to abate his Plethory: In the Winter following a huge Boylariseth in the upper part of his back, for which he was not so much as let blood. I and a Surgeon were called, and found the Abscess exceeding ripe, and pressing it with my fingers found it hollow: I bid the Surgeon use his Lancet, which he did; but the Patient felt it not. And he took great pieces of Flesh away. It cast out good and plentiful Matter; yet without Fever, Fainting, or any other grievous Symptome, his strength was perfect, and his stomach good: For I found him on his legs, not dreaming in the least of his death, which I signified to his Wife, who took me for mad. I took leave of my Patient, intending to return to Newenburgh in Switzerland, where I then practised Physick: But within three hours I was recalled to the assistance of the dying man, who a few hours after departed this life.

XIV. A Girl eight years old had a small Swelling sanguine and phlegmatick on the out side of the right under jaw. I fearing lest the scar should spoil her face, did before the Abscess came to break, resolve to try to disperise it; according to Guido, who saith that sometimes suppurated Imposthumes are cured by discution. After whose example Paræus cured such another Abscess with crude Mercury mixt with Diapalma. I in imitation of him mixed one drachm of the said Mercury with an ounce of Diapalma, and applied it to the suppurated Tumour, which within four days was wholly disperised. The following qualifications are requisite to the disperising of suppurated Matter. 1. That the quantity be but small. 2. That it be thin and serous. 3. That it be near the skin and surface of the Body. 4. That it be in a strong and young Body, and soft fleshed. 5. That it be Summer time.

XV. The Site of the Fibres is to be taken special heed of: for I observed, an ignorant Barber once opened an Imposthume on the forehead cross-ways: The Imposthume indeed was successfully cured, but the Patient was ever after deprived the benefit of his Eyes, except when he pasted up his eye-brows with Plasters. It were more advisable to leave such Imposthumes to Nature, than to commit the Incision of them to unskilfull hands. See Galen. 4. de administ. Anom. c. 1.

XVI. There lies a Nerve under the Buttocks, which if it be cut in Suppuration, or when it is laid bare, be hurt by cold, it leaves the Thigh under it benumbed. A certain man had an Imposthume in the bending of his Buttock where it ends in the Thigh, when the Matter was cleansed the Nerve was made bare, which being hurt by the cold, left the whole Thigh benumbed.

XVII. If there be but little Matter, there is no harm if all run out, which is fit and ready for running, without any violent or long pressing of it (a thing usual with many Surgeons) from which I could never yet observe any benefit to accrue to the Patient; but oft times much hurt. Indeed when the Matter resides in some place remote from the Orifice or is conveyed onely by a sinuous passage to the Orifice, then it is lawfull and requisite to squeeze it out by a gentle pressure of the Part.

XVIII. I saw a Woman whose belly was harder than any stone. I ordered Emplasti. de Mucilag. to be applied, when the place was grown redder and seem'd to give way a little, I ordered it to be lanced, and a good deep incision to be made, great store of Matter gushed out, and she recovered. The

Muscles of the Belly have a very thick Membrane, which except it be pierced, the Matter can scarce ever get out: Moreover I have observed these swellings, when they have not been cut, have turned into Stones, and the whole Mesentery for the same reason hath almost been as hard as a Stone.

XIX. A Boy having a swelling in his Belly was reckoned Hydropick, and when his navel stuck very much out, at last they opened the swelling, and there run out eight or ten pints of laudable Matter, and so he was well cured. Young Practitioners must observe, that such Imposthumes are often bred in Childrens Bellies, which resemble the Dropsie; and if they be opened by the Artift in Time, the Patient escapes for the most part certain death.

XX. If Pain seize any part of the Body, and you have any suspicion that matter is gathered there; if the party sweat, especially about his Face, and the Pain continue, you may certainly conclude that Matter is gathered in that part: Therefore though the colour of the Part be not changed yet it must be opened to let out the Matter. For it is backed with Experience.

XXI. Among all things which move or promote the excretion of Matter, I prefer and commend Antimonial Medicines. For I have often observed they have moreover a Virtue to correct all harms brought on the body by Matter, and to hinder the production of Matter anew. Because Antimony is not less serviceable to the Purification of man's body, than to that of Gold, if it be aright prepared and administered. Antimonium Diaphoreticum stops the continual generation of Matter from corrupt blood, and any other alterative Medicine made of Antimony; and especially the Balsam artificially prepared out of its Flowers, and Balsamus Sulphuris anisatus is good for the same, &c.

XXII. In the Cure of Abscesses after Child-bed you are to inform your self how the Womb is disturbed, and appease that: and if any part of the After-birth be left behind, to endeavour the bringing that away, and by good Sudorificks, Cordials, &c. to expell the venome, and fortify the spirits against the malignity that is thereby contracted, and to temperate the heat and acrimony by Juleps and Emulsions. The swellings arising from these require to be treated in their beginning with moderate Repellents and Discutients. Afterward, accordingly as the matter predominates, make way for its discharge; and cure them as in the treatise of Ulcers is shewed.

XXIII. A young Woman after Child-bed was seized with a great Pain and Swelling in her left Groin and Thigh with Fever. Sr. Charles Scarburgh and Dr. Weatherly were consulted. They prescribed Bleeding and lenient Purgatives, to evacuate the Humours: also cordial Juleps, &c. to temperate the heat and fortify her spirits against malignity. I was also call'd in, and by moderate Repellents mixt with Discutients in Fomentations and Emplasters with Bandage disperise the humour in the Thigh, and restored the part to its former temper: but in the meantime the Tumour increased in that Groin. I suppurated it after the manner of a Bubo, opened it, and endeavoured detersion: but the Sinus reaching down the Twist, the Matter could not be discharged without laying it more open as in Sinuous Ulcers; by which Method I cured it.

Medicines especially made use of by eminent Physicians.

1. To break inward Imposthumes in the body nothing is better than the Juice of Water Cresses: also the Juice of Garden Cresses, strained and drunk, quickly breaks an Imposthume.

2. Defilled Oil of Masterwort is one of the best discutient Medicines for hard Tumours, and unripe Imposthumes.

3. For

Dionysius For-
meret sp. 1.
Rivernum
c. 1.
Vid. Holler-
ium de mat.
c. 1. lib. 2.
c. 1.

Rolsinicius
differ. Anat.
lib. 3. cap. 10.

Hollerius in
c. 1. lib. 1.
c. 1.

Sylvius de
Boe.

Hearnium com.
ad aph. 7.
sect. 6.

P. Effinov.
observ. 2.

Fr. Sylvius
pract. lib. 1.
c. 15. sect. 43.

Idem sect. 44.

Wileman chi-
rurgical treatise,
lib. 1. c. 5.

Idem ibid.

Kornthauer-
us comment.
in Paracelsi
p. 13.

Kunrad. Mo-
dul. de fist.

3. For all Impoſthumes; Starve an old Gander for 3 days, then give him pieces of an Eel newly killed, and gather his Excrements: You will have a present remedy for all Impoſthumes, it is *Rulandus* his Experiment.

4. To break any Impoſthume; Take of Water-cresses as much as you please, pound it with Hogs lard, lay it upon the place.

5. This we have tried; Take of Pigeons dung and Darnel each alike, boyl them in Wine and then make Application.

6. Goose-dung applied fresh and hot, presently makes way for ripening a Sore.

Joh. David Ru-
landus phar-
macop. nove
thece 29. de
stercore anse-
rino. p. 162.

Joh. Stokerus
pract. morb.
partic. c. 11.

Güll. Varig-
nana secret.
sublim. tr. 4.
seum. 3. c. 5.

Arnoldus Wi-
kardus tract.
pract. l. 4. c. 1
p. 534.

Ægylops, Anchylops.

The Contents.

Its Cure without Instrument or Fire. I.

The Cure of one risen from a coated Tumour. II.

One cured by the help of a Seton. III.

How cancerous Ulcers risen about the greater corner of the Eye may be cured. IV.

What Metalls may be used in Cauterizing. V.

When in an Anchylops there is occasion for Repellers, when for Suppuraters. VI.

Medicines.

I. A Young Maid had a swelling at the inner corner of the left Eye, arisen from a Defluxion from her Head, which when it was prest, water ran out of her Eye (this was an *Ægylops*; but if it run not, it is an *Anchylops*) afterwards the Bone was eaten through to the Nostrils, and the Purulent Matter ran through them: We first purged the Head with Cephalick Pills; afterwards we laid on a Collyry to dry up the weeping moisture, resolving to try all things without the Instrument, lest the Face should be spoiled: Then we applied a potential Cautey to that part of the Nose, where there is no danger of the Orbicular Muscle of the Eye: After the fall of the Eschar, the Flesh grew so proud in the bottom, that we were forced to keep it back sometime with Precipitate, and often as the flesh increased, the Cure was retarded with repeated Causticks: At length when no Matter or Water came by the Nostrills, and we perceived the hole of the carious bone was filled with sound flesh, we made use of driers and cleansers of the bone; but without Instrument or fire prescribed by *Agineta*. Whereupon the wound was closed up with a small scar. ¶ If you find the bone carious, lay it as bare as you can, after frew plentifully upon it *Euphorbium*, finely powdered, than which nothing is better in carious bones. You need not fear the acrimony; for our *Euphorbium* does not inflame the adjacent flesh. But I would have a Seton first used, which is of such moment, that I have observed in several persons an inveterate lachrymal *Fistula* could scarce be cured without the help of this. Nor would I have any thing attempted, before the Seton have run for some time, and have drawn to it the Matter, which fell upon the *Fistula*.

II. There is another *Ægylops* often bred of a tough humour like gelly inclosed in a bladder which cannot be cured without opening the Tumour with a knife or a potential Cautey, and taking away of the skin; and then, lest the Ail return, a burning hot Cautey must be applied to cause an Eschar, which when it is fallen off, some beaten Allum mixt with Turpentine may be applied, till it be perfectly healed. ¶ Because this Swelling cannot be cured with Medicines alone, it must be taken hold on with a pair of Nippers, and cut round the bottom with a knife; yet so that the whole spongy Caruncle be not cut off, which is not unfitly called *The Bridle of Tears*: for upon taking it away a perpetual efflux

of them or an incurable *Rhyas* doth follow.

III. A Matron about thirty years of age after frequent inflammation of the Eyes and Head-ach had a Lachrymal *Fistula* arose, and was cured by the help of a Seton.

IV. Sometimes there are cancerous Ulcers in this part, which cannot be cured, except the part be burnt, and the Veins and Arteries especially be burnt thoroughly and to the quick: For so the cure will be most safe without fear of relapse, because when these Vessels are burnt, there can be no more new Defluxion.

V. In the burning an *Ægylops* I should with the more approved Physicians, prefer an actual Cautey before that they call Potential: But why do they order it to be of Gold rather than of any other matter? For one would think it might commodiously be made of Iron, nay perhaps more commodiously; seeing there is an astringent Virtue confest to be in Iron, a quality very requisite in this case: Again, Gold if it be violently heated, melts; if indifferently, it is to no purpose: Yet *Johannes Montanus* a great Physician, chuseth Gold or Brass in his Counsels; by reason the burning is greater, and the Scar deeper, than the tender particles here exposed can endure.

VI. All the difficulty in the Cure is about Repressers and Suppuraters, for either of them seem to incur the hazard of a *Fistula*: that indeed by repelling the humour to the Parts within; and this by putrifying: Nevertheless both must be done sometime of Necessity. When the Defluxion first begins, and the corner of the Eye ailed nothing before, repressers are convenient, for if this place never ailed any thing before, the Parts underneath are strong, therefore Repulsion should be made to the sides rather than directly under: But if in the process of the Disease an Inflammation arise, in this case Repulsion is no way convenient. Sometime we must use Suppuraters, when Nature hath already begun the Suppuration, and the Humour is Sanguine and in great plenty, & when Suppuration cannot be avoided, which when made though but imperfectly, the Abscess must be opened.

Medicines especially made use of by eminent Physicians.

1. Take of Fine Honey, *Aloe Hepatica* each 2 ounces, Myrrhe 1 ounce, Saffron half a drachm, Water 2 pounds. Boyl them over a gentle fire to half, let a new little Sponge be put in the hot decoction, wring it out, wrap it in a fine rag, bind it to the place, and you will see a wonderfull effect as I have often experienced.

2. I never found any thing better, than what follows; Take of *Aquaviva*, *mel Rosatum*, each 1 drachm, Myrrhe 2 drachms. Mix them, make a Liniment wherewith the part must be anointed morning and night.

3. Take Garden Rue, which Fullers use, beat it very fine and apply it, it cures this Ail excellently well. It is very biting at the first; but it will presently grow easy, and (which must be admired) it leaves either no Scar at all, or no disfiguring or remarkable one behind it.

4. Services bruised and applied are reckoned a singular Remedy.

Agonia, or Pangs of Death.

How persons at the point of Death are to be Revived.

When Physicians perceive the Hippocratical Signs of Death, they bid adieu to their Patients, lest they should expose themselves, their Art and their Medicines: But they should not be given up,

Tho. Bartho-
linus cent. 5.
lib. 85.

Fabricius Hil-
danus cent. 6.
observat. 30.

Enchiridii
med. pract.
p. 88.

Scalpetus tab.
32. arma-
ment.

Petrus Bayrus
de med. bum.
corp. malis.
l. 3. c. 26.

Chalmetaus
enchir. bi-
rurg. l. 3. c. 26.

Alex. Traill
l. 1. c. 23.

Arnold. Weis-
kard thesaur.
pharmacop.
l. 1. c. 4.

up, but all means rather should be used, which have any possibility to prolong life. For I have known several at the point of death, who have been given over by the Physicians and yet have recovered by inconsiderable means, I will give you my opinion freely; In the Heart, which is the last that dies, the vital Spirits are extinguished divers ways. I. By the excessive heat of the Blood: Cooling Potions and Epithemes to the Breast relieve such persons. II. Others die, when there is not a sufficient Affluence to the heart to continue the Circulation. 1. If new Chyle pass not to the Heart, either by reason of Expulsion of the Food by Dysentery, Vomiting, or some fault in the vessels of the Mesentery, or if it pass not by the proper ways: Transfusion of man's or Calf's blood would do good in this Case. 2. If the Blood, which should be carried back by the Veins, do clot and congeal, and this it does variously in various Diseases, in the Phthisick, deep Consumption and Fevers, the *Lympha* or usefull *Serum* is wanting in the blood; A warm bath, which dissolves the Coagulation, relieves such for a time: In Tartarous Diseases, as the Scurvy, &c. the Blood wanting Spirituous Parts is made tough and thick; such Patients begin to die at the extreme parts; warm baths also and spirituous Potions, which hinder Coagulation, do help such: In such, when they are dead the Arteries are flaccid, and the Veins do strut. III. The motion of the blood is choaked by suffocating Catarrhs, inasmuch as the Lungs (through which the Circulation of the Blood is made out of one Ventricle of the Heart into the other) and the Vessels of Respiration are choaked by a cold Viscidity: Let the sick Persons be laid on their side, that the Phlegm may run out at the mouth, apply a hot Pulsetis to the Throat and hot sand to the Head and Neck. Because Apoplectick persons die of such Phlegm stopping up the Ventricles of the Brain, Cupping the head and blistering the neck signify little if Apophlegmatisms will not do: The viscid Matter must be drawn out of the nostrils, the Patient's Head must be raised, and shaken a little, to make the matter descend. In an Agony, when there was rattling, and scarce any Breathing, hot Pulsettes, and Sand applied to the throat and breast, and a small draught of warm spirit of Wine with Oil of Almonds, recovered a man of Seventy. If the root of the Tongue and the Windpipe, have any glutinous stuff baked to them, Nitrous liquours and cleansing with a Surgeon's hand are good.

Ex Miscel. cur.
riof. anni
1671. obs.
159.

Alopecia, or Falling of the Hair.

We must proceed gradually in the application of Remedies.

Three kinds of Remedies ought to be provided, Weak ones which are of use in beginnings of Diseases, and in slight Ails, in hot Countries, and tender bodies, as of Children, Women and Persons of Quality; Moderate ones in midling bodies; and Strong ones in strong and old Disaffections. We have laid down this distinction, that it may be carefully observed in the present case, that two errors, that are frequently committed, may be avoided, that is, Ulceration of the skin by sharp Medicines, and Consumption of the innate moisture of the Part by driers, which usually cause an incurable Baldness. For that reason the place affected should be often look'd on, that we may know whether the Medicine applied be too weak or too sharp: For a weak Medicine either hath no effect at all, or a very slow one upon the body; and a strong one acts too violently and hastily upon it. *Rondeletius Pract. l. 1. c. 1. See Sennert. cap. 4. l. 5. Pract. part. 3. sect. 2.*

Medicines especially made use of by eminent Physicians

1. For falling of the Hair of long continuance, the juice of scorching Fennel, made into a Plaster is a present remedy. You need take no further care; for the outer skin will fall off, and when the Matter is cleansed, the Hair will grow of it self. *Ætius sctab. l. 2. f. 2. c. 25.*

2. Rub the place well; then cut an Onion very small, and beat it up with juice of Rhadish and a little Honey, rub the skin gently, then apply this; Take of the seed of Garden Cresses, Mouse-dung, Pepper, white Hellebore each a like quantity. Beat them up with Vinegar. *Id. ibid.*

3. In falling of the Hair, caused by rarity of the skin or defect of the Nutritive faculty, it is found by experience, that nothing can be devised better for shedding the Hair, than *Ladanum* mixt with *Oleum Lentiscinum*, or instead of *Ol. Lentisc.* with *Oleum Omphacium* drawn out of fowre Olives, applied to the Head when shaven. *Id. ibid.*

4. Mallow root is good to make the Hair grow thicker if the Head be washed with Lie made of Mallow root, and then the Hair be smeared with Juice of Mallows. The Hair will grow plentifully and speedily. *Bariellus hort. genial. p. 139.*

5. There is an admirable property in Willow root and Oil, to preserve the Hair from falling. The Bark of the Root burnt and powdered mixt with Styptic Wine, and Oil of Myrtle is very good for Children. *Bayrus de med. corp. hum. malis, l. 1. c. 2.*

6. I have often found by experience, when the hair of the Beard and Eyebrows have shed, that after Purging they have by the blessing of God been cured, who used the following remedy. I made a Decoction of Southernwood, and with the Ashes of it dried and burnt, I then made a *Lixivium*, by putting the said Ashes in the Decoction: I rubbed the bare places very well, I bathed them with the same warm Lie and washed them often. In a short time the Hair grew again.

7. One used a Plaster of Flies bruised made up with Turpentine and yolks of Eggs, and the Hair grew in great abundance. *Forest. l. 2. obs. 2.*

8. In falling of the Hair after Sicknes this is a singular remedy; Take of black Maiden hair, true Maiden hair, each half an handfull, Rose leaves, Myrtle, Wormwood, each one handfull: Boil them in sweet oil and red fowre Wine of each 9 ounces, till the Wine be consumed. Strain them and press them out. Then take of this Oil 3 ounces, of *Ladanum* 2 ounces and an half, Mastick half an ounce. Let the Gums be beaten in a Mortar with a hot pestil pouring in the Oil by little and little, then strow on and mix well of the Maiden hair 4 scruples. *Idem obs. 7.*

9. Burn *Nigella*, mix it with a little Water and apply it. This is found wonderfull good to bring Hair when you apply it to the Head or Chin, but especially to the Eyebrows. *Idem ibid.*

10. For Baldness. The Fat of Moles boiled in water is found to be a most excellent means to produce Hair. *Hartenffer nosodoch. p. 75.*

11. To make the Hair grow again; Take the Leaves of Water Lily, boil them well in fresh butter, strain them and then bear them well together again. Make an Ointment, wherewith anoint the place, and it will grow wonderfully. *Stokori prax. aurea l. 2. c. 1.*

12. I have tried in falling of the Hair, if the bare places be anointed with the juice of Yarrow and Oil of Bays mixt together, the Hair will come thick. *Arn. villa nou. l. 1. breuiat. c. 22.*

13. To make Hair come again on any place where the Hair is shed. Take the inner bark of Elm root, bruise it, boil it well in water, gather what swims at the top. Shave off what hair there is on the bald place, rub it violently with a cloth, till it grow red, then anoint with the foresaid liquor, If you do this often, you will make Hair grow quickly. *Idem l. 2. c. 47.*

Alvus

Alvus Adstricta, or Costiveness. (See Lenitives, Book XIX.)

The Contents.

- The way of Loosening various, according to the diversity of Causes. I.*
The abuse of Looseners hurtfull. II.
When to be given. III.
Clysters preferred before Purging. IV.
The efficacy of drinking Oil of sweet Almonds. V.
A Stool is caused by putting the feet in an emollient Decoction. VI.
The use of Tartarum Emeticum. VII.
Crude Mercury taken. VIII.
Straining to be avoided. IX.
For whom Clysters are proper. X.
We must not purge Phlegm too much. XI.
Pickled Meats good. XII.
Medicines.

I. IF the Belly be to be loosened, respect must be had to the Causes; if it be dried up, the Physician must neither give Aloes nor Scammony, nor any Purgatives, according to Hippocrates de m. m. If you would cause a stool, saith he, drink no Purge, but use other things; for, besides that it will do no good in this case, it will draw more to the Intestines. If heat be the cause of Costiveness, Mucilages of Linseed, Quince and Fleawort-seed may be put in the Clysters: by this means the thick and corrugated parts are made laxe, the hard are softened, and the heat of the Intestines passeth away in Steam: If the Faculty of the Guts be slow, languid and dull, they must be involuntarily excited to motion by sharp Clysters, in which you must leave out the oily things which are usually added, lest their Virtue be made dull: If one go not to stool because the Liver breeds no Choler, have a care of Rheubarb: If from abundance of Wind, the effect of a weak Stomach, *Hiera* should rather be given than *Cassia*: If from want of sustenance, more plenty of it must be allowed: for Weight and Pinching are causes that move the Expulsive Faculty. ¶ *Sennertus*, in *Epitome Instit.* blames the Weakness of the Muscles of the Belly (which also concur to the exclusion of the Excrements) Therefore Childbed Women go to stool with difficulty, not onely because of their long lying in Bed, but because their Muscles are weakened by their labour: Laxatives and meats of the like nature are here used to no purpose; some Turpentine rolled in Tiphany is more convenient, or Aloes, or Rheubarb, wherein there is some small Astringent beside the stimulating Virtue; or a motion is to be procured by sharp Clysters. A certain Melancholick person had a very costive Body, so that sometime he went not to stool once in six or seven days. He was cured by taking about two hours before Supper some stewed Prunes with their liquor, to which he added a small glass of Wine mixt with a great deal of water: half whereof he took before his Prunes, and the other half after: so he went well to stool; and this wrought better than Prunes alone are used to doe. A Matron about fifty complained that the strongest Purge would scarce work with her; I suspecting the heat and driness of her inwards (for she was Black, Hairy and Masculine) by giving her six drachms of Lenitive Electuary, and half a pint of Whey to be drunk upon it half an hour before Meal, obtain'd that which stronger means were not able to effect: For within a few hours she was very laxative. So I perform'd that by gentle means which the former Physician could not doe by stronger.

In Costiveness accompanied with Wind and tormenting Gripes, seeing then Acidity is joyned with the Viscidity of the Humours that turn to Wind, we must chiefly make use of some oily volatile Salt,

mixt with Opiates, and all other Aromatics, which are likewise good to break the Wind: But if mere Driness of the Excrements create this trouble in going to stool, the Excrements must be moistened and softened before they be voided, and this may be done over some Steam, or by application of a Flannel or Sponge impregnated with the emollient Decoction: for so the excrements will be softened and more easily voided. Besides, the Belly must be anointed with some emollient Unguent, that the Excrements may pass with more ease. A few days ago I was called by a person of Quality, I found a Child four years old very unhealthy, who went to stool but about once in three weeks, and in the meantime the Excrements were baked into Lumps, which you might distinctly touch through the Muscles of the Belly, and feel how big they were; nor were they voided without great pain, and sometimes loss of Blood, and Sweat all over the Body. After the use of an emollient Ointment, within eight days he went to stool several times with much Ease: I have frequently observed a Clyster of Milk with a little Honey of Roses hath done much good in such a case: for the Acidity, the usual companion of Wind, was tempered by reason of the Milk, and the Excrements were in some measure also loosened and softened.

II. It is not good to use looseners, as Apples, Prunes, or other fruit, frequently, and to cause plentiful evacuation; for they relax the Stomach, which when done, there can be no right concoction: Seeing we are inform'd, that the Stomach concocts food aright, when it is corrugated and contracted into itself, and that it embraces and contains the whole Mass till it be concocted.

III. Prunes loosen, especially if they be eaten not immediately but some time before Dinner, and alone: for we must remember these common directions for all Laxatives, out of *Galen. 2. de Aliment. fac.* The reason is, because they pass into the substance of the Body, for that they are not pure Medicines, but have something of Nourishment: Therefore they that give Manna and such things four or five hours distance from Meals, are ever disappointed of their End.

IV. In great obstructions of the Belly we have observed the Opening of it to be very difficult in several Patients. We must not pass in silence, what we have several times met with in our Practice, that when the Belly seem'd to be sufficiently emptied by purging Potions, and liquid Excrements were voided; nevertheless a great deal of other dry Excrements stayed behind in the Guts, and created a new Obstruction and repeated Pains. I was called to one sick of the Colick; when I had given him a purging Potion, and he had purged much liquid Excrements, and yet neither the load in his Belly nor his pains did cease; I therefore ordered a Clyster, which brought away great store of dry and hard Excrements: From whence I conjecture, the Potion brought away some liquid Excrements; but that it was not able to discharge the Load of hardened Excrements. But it is usefull in such an Affection of the Intestines to loosen the Body with a Clyster or two, and after to give a purging Potion, which if either it work too slow, or Purge but a little, you may last of all give a Clyster to remove the Obstruction with more expedition. In curing a costive Body, it is better to admit of several Clysters seasonably repeated, than to take any one lenient Potion whatever. One good Purge, administered with judgment in the Colick pain, does that at once which Clysters cannot well reach: especially in Colick pain from Obstruction of the Excrements above the Valve.

V. Sometime Colick Pains and many Symptomes arise from the hardened Excrements. I knew a Patient who was much troubled with a kind of hard swelling in his left side under the Spleen for two years.

Riverius
centur. 3. ob-
servat. 5.

Sylvius de
le B. & ppen-
Tract. 5. sect.
141, 142,
143.

Crato confis-
lio scribo a-
pud Schol-
tizium.

Augenside

Oetblussopud
Schenckium

Rolfsider

years. His Physicians continually ordered him Ointments and Fomentations, without any benefit; at length more Symptoms coming upon him, he died. We opened his Body and found the exceeding hard Excrement was the cause of that old Swelling: And then we found the cause why the poor wretch sometime voided by stool certain green and exceeding hard round lumps; for the Excrement, by reason of its weight tending downwards, some portion of it turn'd globular, which was daily brought away by Clysters; and afterwards, by reason of the parching Heat of the great Artery, which was near the place, new Excrement was again joyned to that Mass, and so hardened: From the foreknowledge of this case I cured several such with two ounces of Oil of sweet Almonds, taken every day for a month together four hours before Meal.

Sanctorius
art. par. c. 94.

VI. The Feet should be held in some mollifying Decoction: for as Astringents are applied to the Soles of the Feet, and the Legs are bathed in some Astringent Bath, when we would bind a loose Body; So the same Parts may be bathed in some emollient Bath to make a Costive Body loose.

Fischer, med.
pr. 11.

VII. A Costive Body had brought a man almost to Death's door; Solutives, whether taken in at the Mouth or by Clyster, were used to no purpose. The Obstruction continued immovable for above a fortnight. The Belly rose in a hard swelling with preternatural Heat and worse Symptoms. I therefore, judging that a desperate Disease must have a desperate cure, gave six grains of *Tartarum Emeticum*, to be taken in fat Broth without salt, and ordered a suppository to be given at the same time: Upon this the long desired Discharge both upwards and downwards did succeed. The Patient was for a while very weak; but a little after he recovered perfectly.

Ehrenfried.
Tagendornius
m. f. curif.
ann. 73. obs.
16.

VIII. A Maid laboured of irrefoluble Obstructions. A desperate Apothecary, when he had tried several things, gave this desperate Maid two ounces of crude Mercury. After which plentiful Evacuation succeeded, and after a few days she recovered her former Health.

Sam. Ledel.
us m. f. curif.
ann. 72. obs.
225.

IX. I knew a Man, who went to stool but once in a fortnight or three weeks, and ever with so hard straining, that blood started out of his Nose. Many laugh at *Ficinus*, who, *lib. de san. Studiis*, cautions men not to strain too hard in going to stool for fear of an Apoplexy or Epilepsy. What such hard straining can do, this present Instance doth shew: Nor is it any wonder to me that the Veins and Arteries in the *Plexus Choroideus* (part whereof reaches to the Ventricles of the Brain) should either be burst or so strained, as to straiten the Brain; and so cause those Diseases.

Ph. Salmuth.
cen. 3. obs.
26.

X. The Excrements are often gathered in the upper and larger part of the *Colon* near the Liver and Stomach: And because the Body is perspirable, if at any time one be slow in going to stool, the Stomach grows squeamish by reason of the filthy stink of the Excrements, the appetite is destroyed, the Heart faints, and the Brain is stuffed and oppressed; then nothing is better than to wash the Guts with Clysters.

Riolan. an-
thropograph.

XI. Phlegm bred in the Stomach conduces to the better expulsion of the Excrements; for unless the Intestines be moist and slippery, Excretion will be difficult. We understand the necessity of this thing from some persons troubled with the Colick, whose Guts were so fadden with Clysters, Fomentations, and all sorts of Medicines, that they were like Leather; such never go to stool except forced.

Riolanus in
Enchirid.

XII. The Ancients used pickled Meats, and they are left off by us, to the great detriment of the Sick; For it is certain, that these Pickled things did not onely cut Phlegm and provoke to Stool; but they exceedingly strengthened the Stomach, helped Concoction, and stirred up an Appetite. But if the Body itch, we must abstain from them.

Crato.

Medicines especially made use of by eminent Physicians.

1. A Medicine for Costiveness. One cured a T. Bartho-
Costiveness, that had lasted three weeks, by drink-
ing onely a good quantity of Whey made of Goat's
Milk.

T. Bartho-
lin. obs. med.

2. Tincture of Tartar is very good for Costive-
ness.

I Agricola in
Poppium
traç. de tar-
taro, p. 688.

3. It is wonderfull, but usual, for Lettuce eaten in
a small quantity, to bind; but eaten plentifully, to
loosen.

Al. Bened. l.
13. c. 16.

4. To loosen a Costive Body. Toast a slice of
Bread, besprinkle it with Oil Olive, eat it in the
Morning; you will see the effect, especially if you
do it twice or thrice.

Borel bist. &
obs. med. cen.
2. obs. 18.

5. An easy Purge; Take of the Oil of Indian Pine
nut, or of *Ricinus Americanus* drawn by Expression,
2 drops, in drink or broth, it will make you purge
gently.

Id. cent. 3.
obs. 29.

6. The Pulp of Corinths without any mixture is
highly commended as a Specifick.

Fred. Hof.
meth. med.
l. 1. c. 19.

7. The following Broth doth most certainly
loosen the Body, and leave it loose for some days fol-
lowing; Take of Bete Leaves, Mercury, each 1 hand-
full, Boil them in ordinary Broth; Take a Mess of it
an hour before dinner.

River. prax.
med. l. 11.
c. 3.

8. Aloes is very good to loosen a costive Body,
and *Species Hiera* made with 8 parts of Aloes, which
may be given from half a drachm to a whole one, an
hour before Supper. But it must not be often used,
especially in dry Bodies.

Sennert. l. 3.
prax. part. 2.
sec. 2. c. 4.

Aneurisma, or an Aneurism.

The Contents.

Its Nature and Cure. I.

Cured by Purging. II.

Cured by hard Binding. III.

Opening seldom safe. IV.

A Caution when an Artery is opened instead of a Vein. V.

Cured with a Cap of beaten Lead. VI.

Medicines.

I. I Could never conceive how the inner coat of an
Artery can be broke which is thick, and the
outer Coat, which is as thin as a Cobweb, should en-
dure whole (which is *Sennertus* his opinion) and so
breed an Aneurism, when indeed there is no such
distinction of Coats at all. But I acknowledge it may
be bred two ways; One way from an External;
Another from an Internal cause: The External is a
Wound made in the Artery by an unskilfull Surgeon.
For the Artery may be skinned over, and yet not
so soundly healed, but that the Blood, forcing vio-
lently on the weak part of the Coat, may raise a
Tumour upon it: The internal cause is the Opening
or *Angustiosis* of a little Artery, by which the Blood
passing into the empty space or Interstice of the
Mufcles, is congealed into a Clod, which increasing
by degrees, and by continuance being more con-
cocted, turns into a fleshy Mass, not unlike the
Mufcles, which is found hollow, and contains in its
middle plenty of black clotted Blood. And in what
I say, I am back'd with experience, acquired by
Dissection of an Aneurism in *Venice*, Anno 1643. and
with the Testimony of famous *Bogdanus*, *Observat. Med.* 8.
But as the first case may be cured by binding and
pressing the Tumour; so the second case scarce ad-
mits of any cure at all, unless one will cut the Arte-
ry, by dividing the skin take away the fleshy lump,
and fill up the broken Artery with new flesh by Sar-
coticks. I and a Surgeon were called to cure an A-
neurism, occasioned by letting of Blood, I presently
threw

L. Van Hooi
microtech.
sec. 2. c. 16.

Horstius,
Tom. 2. Lib.
9. Obs. 1.

threw away the things which were improperly applied to soften the Tumour; because Gangrene, Mortification and Corruption of the Part do follow such Softning and Suppuration. The Part affected is very often the Neck, because of the Carotid Arteries. Yet I have observed it in the Arms and Legs. The Cause is a sharp, serous and bilious Humour, eating either one or both the Coats of the Artery, and sometime the neighbouring Bones. Surgeons, ignorant in their own Art, take it for an Abscess, and having opened it with an Instrument, the Patient dies immediately in their very presence. The Tumour must in the Beginning be compressed presently, and the sharp Humour repelled: Both these things may commodiously be done by a thin Plate of Lead. I cured a poor man palliatively by this means, so that he lived fifteen years after it: The Swelling was above his right Knee, as big as a Hen's Egg. Some advise to intercept the flux of Blood, by tying the Artery above and below the Aneurism, and when you have cut it to heal it: But this is a painful kind of Remedy; nor is it safe. I had rather, to save ones Life, cut off an Arm or a Leg. We dissected the Body of a poor Man, who died of an Aneurism, we found plenty of Blood, both Serous and Grumous, and both Coats of the Arteries and the greatest part of the Collar Bone on the Left side eroded.

P. Barbetto,
Præf. lib. 2.
c. 3.

II. One was let Blood in the Basilick Vein for an Itch caused by a Melancholick Humour, and the Artery was also prickt, whereupon, by little and little, an Aneurism arose, to which, when for above a Months time they had applied several things to no purpose, and they were past hopes of saving his Arm, he came to me. I found the Swelling as big as a Goose Egg, pale and also hard, in which you might not only feel a Pulsation with your Finger, but you might perceive it by your Eye. I with much entreaty undertook the Cure thus. When I had in the first place ordered his Diet, and applied my Plaster of Hemlock to the hard Swelling, he took a Clyster, and a Julep to digest Melancholick Humours. I then gave him a Purge, which when it had discharged the Noxious Humours both upwards and downwards with great Violence, it so recalled the Spirits and Blood, which were in the Aneurism, to the inner parts, that the next day we could perceive no Pulsation: The Swelling also was much fallen; then I applied the following Plaster. *Take of Emplastrum Diachalcitæ, Two Ounces; Powder of Mastick, Red Roses, Myrtle, Comfrey Roots, each One Ounce, Oil of Roses what is sufficient.* Afterwards I made a Bolster, or rather a Knot of Linen, often doubled, and laid it on the Tumour, and bound it fast with a Roller, to repress the Tumour, and hinder the influx of the Blood out of the Artery into the outer Membrane dilated. And by these Remedies the Arm was perfectly restored.

Fabricius
Hildanus,
Cent. 3. Obs.
44.

III. One prickt with the point of a very sharp knife an Artery in his Left Hand, between the Thumb and Fore-finger, the Blood run out by leaps; with an Astringent Plaster applied in time, the outer Coat of the Artery closed presently, but the inner remained open, and they were parted one from the other: Therefore the outer Membrane was so elevated by the vital Blood, that it degenerated into a true Aneurism, with a continual Pulsation and Pain in the adjacent Nerves. You could no sooner press this Pulsatile Tumour with your Fingers, but the Blood presently gushed back to the Veins, and the Aneurism seemed to be gone: But it immediately came in View again, if you removed your fingers never so little. Surgeons were not wanting who would gladly have seared the Artery across with a hot Iron; but the Remedy would have been more cruel than the nature of the Disease required, and therefore we made tryal rather of an Astringent Plaster, and bound it so strait with a Plate of Lead, that when the Blood was forced out of the Tumour, and the gaping of the wound con-

veniently shut, the inner Coat of the torn Artery might close, and grow together: And it did close within five Months, there remained onely a little Knot about the Scar, which at length also vanished, before the Aneurism was perfectly cured.

Tulpius, c.
16. lib. 4.
Obs. 1.

IV. A Woman beat her Son, about Seven years old, on the left side of the Head with a Stick, upon the place where the Carotid Arteries pass, whereupon a Pulsatile Tumour, like a Walnut at first, black, and yielding to the fingers, presently arose, and within eight days grew so big, that it spread over half the head, from the Sagittal Suture over the Temples and Forehead, to the very Eyes: The Physicians, upon Consultation, judging a doubtful Remedy should be preferred before most certain hazard of Life, open the Swelling with an Instrument, and taking away some part of the Blood, which gusht violently out, and stopping what remain'd with strait Ligature and Astringents; and doing thus frequently, they perfectly cured the Boy in a few days; Either because in young Persons all things are tender, and easily grow together; or because the hurt Artery had a bone under it, and so might be bound the harder to make it close. Hence Riolanus affirms, That the Arteries of the Temples and Forehead may be safely opened. Few find an Aneurism doe well, because the Arteries will not endure opening: Yet sometimes the strength of Nature conquers the Disease, a strait Ligature doth now and then miraculously close a gaping Artery. But we experience the Effect of this Operation onely in the lesser Arteries: for in the greater, the Coats, because they are thick, are not easily broken, unless of a violent Cause, and the Ruptures are healed up with more difficulty, and the Aneurism, because of the continual afflux of Spirituous Blood, daily increases. The hoped Cure succeeds better where the Coat of the Artery is dilated, than where it is quite broken. And upon the Blood's being hot, and so inclined to Violent Motion, or its being cold and thick, and so slow in Motion, the Cure or Death of the Patient doth in a great Measure depend. We saw a Mortal Aneurism in a young Man, who had hurt his Thigh, nor did we wonder at it, for in opening it, we found the great Crural Artery broken, whereupon the Thigh swelled so much, that it seem'd quite Scirrhus; and after he was dead, and his Thigh opened, there run out not onely as much Blood as would fill three of our Measures, but we took out of the Sinus's, which were made between these vast Muscles, Grumous Blood, resembling, in shape and bigness, the Parenchyma of the greatest Liver: While he was alive neither Section was safe or possible, because of the huge breach of the great Artery, and of its Lying among the Muscles; nor was Ligature sufficient. I advise the young Surgeon not to open Aneurisms unadvisedly, unless they be small, and in an Ignoble Part, and have no Vessels remarkable. Let him rather take this Course of Cure: Lay the Skin over it open till you find the Artery, separate it on every side from the Parts about it; run under it a blunt crooked Needle with a Thread in it, bind it, and cut it off; you must tarry till the Threads tied about it fall off themselves, and till Nature have filled the Ends of the cut Artery with Flesh, and then the rest must be healed up as in the Cure of simple Wounds.

Riolan. fol.
Enchir. p.
332.
Job Mich.
el Petri.

Bartholinus,
Cent. 3.
Epist. 54.

Parsus.

V. A Surgeon, when he was Letting a Man Blood that was sick of a continual Fever, opened an Artery instead of a Vein. The famous *Garcias à Lopes*, a Jewish Physician of *Burdeaux*, standing by, suffered him to Bleed above Two Pounds, till he was ready to faint, on purpose, that the Vessels about the Part being drained, the Pulsation of the Artery, which would have hindered the healing of it, might be less: Then applying a piece of Silver with a Bolster, it was hard bound; it was loosed after Eight days, and the Patient escaped the danger of an Aneurism.

He was rid of his Fever by the large Evacuation of Blood; but he was faint a long time after.

VI. I have had many brought to me with swelled Necks, upon suspicion that they were troubled with a Species of King's Evil, called *Bronchocele*: but the Pullation of those Tumours shewed them to be Aneurisms, and the most difficult to treat; they, by reason of their Situation, not being capable of Bandage. In which cases I commonly proposed the wearing of a Cap of beaten Lead, made of many Sheets laid upon one another, and covered with Silk or Sarfenet, which with Ribbons were made to fasten about the Neck with much ease: or, if they would have Emplasters, I applied some of a mixture of *Unguent. fumach.* with *Emplast. Casaris*, or such like.

W. Seman's
Surgical
Book
1. c. 16.

Medicines especially made use of by eminent Physicians.

J. Cas. Clau.
ius, Con-
sult. Med.
1. c. 16.
oh Poppius

Sen. 1. 5.
Pract. Part.
1. c. 43.

1. A Plaster of Elm-Bark boiled, and made up with Wine half boiled away, applyed and kept on till it be dry, is of wonderfull use.

2. Plantain boiled in Wine, and applyed hot, is good.

3. The following Medicine is very good; Take of Frankincense 2 parts, Aloes 1 part, Mix them, Beat them together with the White of an Egg and Hare's Down. Apply it to the wounded Artery.

Angina, or Quinsey.

The Contents.

Whether a Vein should be opened in every one. I.

It must be done plentifully, but by turns. II.

When the Months are obstructed, or are present, what Vein must be opened. III.

When the Disease is urgent, whether we must begin with letting Blood under the Tongue. IV.

A very acute one cured by opening the Jugular Veins. V.

One Suppurated, Cured by cutting in the Neck. VI.

The Abscess opened by a Cheat. VII.

The Dog Quinsey Cured by Cupping and Scarifying the Neck. VIII.

Whether cutting of the Aspera Arteria may be used. IX.

It must be forbore, if the Lungs be also inflamed. X.

A Bastard Quinsey Cured by an Issue. XI.

When the Imposthume is broke, care must be had that it fall not downwards. XII.

One caused by a Vertebra out of joint, not curable by cupping. XIII.

Whether to be Purged in the beginning. XIV.

Whether Gargarisms be proper. XV.

Whether they should be hot or cold. XVI.

The benefit of Spirit of Wine. XVII.

Whether a Swallows Nest be usefull. XVIII.

There may be Nutrition by Clysters, when swallowing is lost. XIX.

In a Malignant one we must use Specificks. XX.

Sleep must be avoided. XXI.

A Bastard Quinsey the Product of Hypochondriack Melancholy. XXII.

What Vein must be opened. XXIII.

Bleeding must be repeated. XXIV.

Potions must rather be given, than Medicines in a solid Form. XXV.

Discurrent Bags are bad. XXVI.

I. **W**HETHER a Vein should be opened in every Quinsey? The Negative seems probable according to the Opinion of *Mesue*, who sometimes orders a Purge before Blood-letting, especially when the matter peccant is also Choleric or Phlegmatick; because the Choleric matter boils and ferments higher, when the Blood is taken away,

and the Phlegmatick matter usually causeth greater crudity. Nay, if what *Avicenna* saith be true, That it is better the strength should remain in the Body, and that the peccant Matter should be taken away by Evacuation; it of necessity follows, that in a Quinsey, caused by a Choleric or a Phlegmatick Inflammation, Blood must not be let in the beginning; seeing by this means faintness follows, and Choler or Phlegm are not first purged, which certainly indicate Purging of the Matter rather than Blood-letting. But we defend the contrary with the greater number, *scil.* That in every Quinsey, whether the Blood offend with Choler or Phlegm, or alone, we must begin with Blood-letting, if nothing hinder; because in the beginning a Man must presently take care to stop the afflux of Humours to the part affected, which may conveniently be done by letting of Blood, which draws back the affluent Matter from the part affected: For as in other Inflammations Blood is let, not in respect of that Matter, which hath already actually caused an Imposthume in any part, but for Preservation's sake, in respect of the Matter yet affluent and increasing the Inflammation; so here we prescribe Blood-letting in the beginning, lest the Inflammation should be increased by the affluent Humours, and there should be imminent danger of present Suffocation.

Gr. Horstius,
Problem.
Dec. 4.
Quest. 4.

II. Seeing a Quinsey is a most acute Disease, and that sometime it takes a Man away in one day; the Great Remedies are to be used with huge Care and Diligence. Therefore, at what hour of the day soever a Physician is called, let him take away Blood presently, from the same side the part grieved is on, to one pound, a pound and an half, or two pounds, as the Patient can bear it: For the principal hope of safety must rely on this Remedy. Yet so great a Quantity of Blood must not be taken at once, lest the Patient fall in a swoon, whereby his life would greatly be endangered; but at several times, that is, once in three or four hours.

Riverius
Praxicos, lib.
6. c. 7.

III. If you meet with a Woman in a Quinsey, who has her Months stop, or is in daily expectation of them, or actually has them, What must then be done? I would not have you follow them that breathe the upper Veins; for at this time you must breathe the lower. *Trallianus* teacheth this, lib. 4. c. 1. And Reason teacheth it: For in this kind of Blood-letting there is not onely Revulsion, but also an Evacuation of the accustomed natural Purgation, which hugely helps the Inflammation. But if Strangling perplex you, when you have opened the lower Veins, you may with safety open a Vein under the Tongue: For this Blood-letting draws not from the Womb, nor from the whole Body; but onely evacuates the Part affected.

Saxonia Pra-
lecta, pract. co-
de Angina.

IV. A Man of Fifty newly fallen sick, was taken about Midnight with so violent a Quinsey, that he was not able to speak one word. A Surgeon was called, who let him Blood under the Tongue, and in a short time he recovered. *Saxonia* Writes, that the opening of the Sublingual Veins should not be onely once, but repeated twice or thrice, as necessity requires, and Suffocation is urgent.

Rolincet-
us, Consil. v.
lib. 3.

V. The Ancients in a desperate Quinsey opened the Jugular Veins, which Remedy, although it be approved by most of the Moderns, is grown quite out of use in our times, because it is accounted dangerous, but erroneously. *Trallianus*, l. 4. c. 1. saith, He Cured several of the Quinsey by opening these Veins. ¶ I had under my Cure, Anno 1675. in the Month of May, Mr. Dennis Bordier of Geneva, a lusty Man, taken with a Quinsey and an acute Fever, although his Breathing and Swallowing were easie enough; I bled him in the Arm, the Blood run very pure, but without any ease; I bled him under the Tongue also without any Benefit: But when I opened the Jugular on that side, where was most Pain, very Putrid Blood ran out like a Rivulet, to his sudden and manifest Ease. Although this Ail ended in a Peripneumony,

Peripneumony, from which he shortly recovered by repeated Blood-letting and Expectoration.

Lanfrancus
Chirurgie
lib. 2. c. 17. 3.
c. 5.

VI. A Matron of Fifty had a Phlegmatick Quinsy all over her Throat, within and without; the Swelling appeared great outwardly, her Swallowing and Speech were hindered: When I touched the place, I found Matter lye deep; wherefore I knew that she would be choaked before the Imposthume would break, either inwards or outwards; and feeling of it with my fingers, I found ripe Matter gathered more between her Chin and the Epiglottis, than any where else, and avoiding the Nerves and Vessels, I made a deep Wound in that place, out of which I took a good share of the Matter, leaving much behind. Then she took her Breath better, and the Fear of Death abated, &c.

P. Barbetto,
Prax. Med.
l. 2. c. 1.

VII. The Wife of N. being Plethorick, underwent most exquisite pains in her Jaws, her Tonsils were so swelled, that she could not swallow one drop, but threw whatever she took out at her Nostrils. I ordered Blood-letting, I used Cataplasms and Gargarisms, and the fourth day of the Disease, as I was searching the Sore with a Probe, I saw the Abscess suppurated: I was resolved to treat her somewhat inhumanely, I broke the Abscess with the very same Probe; upon which, when the presently grew better, she Laught, and commended my honest Cheat.

VIII. Benvenuto, when a Man was almost strangled by a latent Quinsy, and given up for Dead, cut the place with deep Gashes under the Jaws, and on the Throat also, out of which there run much Corruption, and so rais'd the Man from Death to Life.

IX. Cutting the Windpipe is seldom put in practice, for fear of Disgrace, if when the Operation is perform'd, the Patient should Dy: Besides, in a very dangerous Quinsy, the Lungs are often afflicted and stuffed with Humours, which choke Men; in which Case this Operation is practised to no purpose. Yet Examples are not wanting of those that have had good success in it. Famous Renatus Moreau used it in a Gardiner and a Soldier, both which recovered of their Disease and Wound, onely in the latter there remained a little hoarseness in his voice. The celebrated Tulpus, obs. 50. l. 1. shews, that Wounds of this nature heal quickly. Things that were never tried seem terrible, which, after they have been once practised, are used as confidently as they are perform'd easily. This is confirm'd by the Opening of the Jugular Veins, now very usual, and by Cutting for the Stone. The way of performing the Operation is thus; Let the Patient be set in a Chair, with his Head leaning back as much as he well can: let the Servant standing behind him, take up the skin on each side of the forepart of the Neck, and the Surgeon must cut the Skin length-ways with the Muscles under it, just against the *Aspera Arteria*, not far from the pit of the Throat, and with a broad Lancet he must divide the Space between the Cartilages, and having made a hole, he must put in a Silver Pipe, a little crooked with Legs: By this way the Breath goes and comes to the Lungs, till the Inflammation be either dispersed, or brought to Suppuration, and a passage for breathing by the Mouth be restored.

J. Van-Horne
Michtroscopia,
Sect. 17.

X. In that sort of Quinsy, where the Muscles of the Larynx are inflamed, called, *The Dog Quinsy*, Breath may be restored to the Choaking Patient, by the help of Laryngotomy, an Operation less hazardous than the Disease. Nevertheless here great Circumspection must be used, lest, if other parts also, as the *Pleura*, Lungs, Gullet, &c. be inflamed, or full of Matter, the labour be in vain, and so give occasion for Reproach. All things therefore well considered, the Operation may be gone about in this manner; Let the Head be bent back a little, that the *Trachea* may come more in sight, and the Cartilaginous Rings may part the wider one from another: Let the Skin of the Wind-pipe be cut length-ways to the Pit: Let it be drawn asunder by the Servant's

fingers on each side, that the Surgeon may see the *Sternothyroideus* Muscles, which are to be parted one from another with a Wooden or Ivory Knife: After the Windpipe shews it self, Section must be made with a Lancet, in the middle space, between the third and fourth Cartilaginous Ring, taking diligent care that the Cartilages themselves be not hurt. When the Wind comes out, take away your Instrument, and fasten a Silver Pipe in the Wound: Care must be taken that it be not over long, nor touch the back-part of the Windpipe, for then it would cause continual Coughing. When the danger of Choaking is over, which usually comes to pass in three or four days, the Pipe must be taken away, and the Wound cured the ordinary way according to Art: for it differs not from other Wounds.

Barbetto,
Prax. P. m.
130.

Chalmereus
Enchir. P.
113.

XI. When the Imposthume is opened, care must be taken that the Corruption fall not on the Lungs, nor into the Stomach, for fear of another Disease; but it must carefully be cast up at the Mouth, and then a Gargarism of *Hydromel* used often is good for Deterision, &c.

XII. One had been sick of a Bastard Quinsy, and he often Relapsed: Because some thin Matter alway flow'd to the foresaid parts, I therefore ordered him an Issue in one of his Arms, which we tried as the last Remedy; and by God's Assistance we restored the Patient to perfect Health.

Mercurialis
Consul. Med.
2.

XIII. There are some, who in that sort of Quinsy, which is caused by a *Vertebra* of the Neck split inwards, use Cupping glasses, thinking by that means they may draw the dislocated *Vertebra* outwards again, which Hippocrates expressly forbids, lib. de Articulis. But it is great weakness to think to draw out the *Verticles* split inwards, by applying Cupping Glasses: for they rather drive forward than backward, nor do those that set them on, take notice of this: for by how much faster they set them on, so much the more crooked are they made to whom they are applied; because they shrink the outer skin together.

XIV. When the Patient has bled enough, he may be purged the day following, never waiting for the Coction of the Humours, because the Disease gives no Truce: Nay, if that it be very violent, you may bleed and Purge the same day; which *Trallianus* saith he did; l. 4. c. 1. But it must be done with gentle Medicines, because of the Inflammation. After the Patient has been let Blood, the next morning, if the Fever and Pain be any thing abated, I presently give him a gentle Purge, which, after Blood-letting, is the best thing can be done, and by often experience I have found it highly necessary: If afterwards, which seldom happens, the Fever and other Symptoms invade him, they must be encounter'd with repeated Blood-letting as before. Through the whole course of this Disease, I order every morning a Cooling emollient Clyster, except the day allotted for Purging.

Riverius, l.
6. c. 7.

XV. There are some that prescribe Gargarisms of some sower and bitter things, that are not very ingratefull to the Taste, for repelling the Humour: Yet I suspect the use of these things in this case, because the Parts Inflamed should be quiet; but the Throat and Jaws are moved by Gargling: Therefore I would either have them not used at all, or held in the Mouth without stirring, lying on ones back, that they may come to the Part affected: Then I prescribe the following Gargarism, not to be used the common way, but to be kept in the Mouth without Gargling, till it be hot, then to be spit out, and more taken. Take of Water of Plantain, Red Roses, and Frog Spawn, each four ounces, three Whites of Eggs beaten to water, of White Sugar-Candy three Drachms, make a Gargarism.

Sydenham,
Observ. Sect.
5. c. 7.

Enchir. Med.
Pr.

Sydenham,
loc. supra
cit.

XVI. Galen and his followers; in all sorts of Quinsies, from the Beginning, use cold and astringent Gargarisms, contrary to the Precept of Hippocrates 4. de rat. vi. in acut. vers. 72. who prescribes Gargarisms actually hot. They mistake, not considering how such Medicines cause certain and speedy Suffocation.

in the Quinsey, which depends on Phlegmatick Matter, seeing it gives not place to Repellents, but being thickned and more settled in the Part, it is rendered more unfit for Discussion, and readier for Suffocation: and in that which comes of sharp and thin Matter, although they be not so pernicious, yet they may doe more hurt than good; for since they cannot repell upwards the Matter descending from the Head, when it is forced either to the inner parts of the Muscles of the Throat, or upon the Lunges; they may make the Disease more dangerous. Hippocrates his Advice is better, whom all the Ancients follow'd (as you may see, 6. de comp. Med.) while he thinks good in all sorts of Quinseys, and at all times, to abstain from Repellents, and always to use Rarefiers and Discutients, that the Matter may more easily be raised by Spittle, and be driven outward and discuss'd. Nor is there any fear the Flux should increase, seeing it may be prevented by Bleeding and Purging, and other Remedies respecting the Matter fluent. And if at any time he would have some Astringents mixt with the foresaid Medicines, when the Matter is thin, he does it not because he would repell, but that by their drying virtue, he might avoid too great laxity of the Part, and that he might lessen the Swelling: Therefore he approves the use of them rather in the Beginning, than at another Time, as appears from lib. 2. de morb. sect. 1. vers. 24.

XVII. Humours sticking in the Flesh, which are wholly extravasated, cannot run because of the thicknes: Therefore the Physician must make them fluxile with hot Medicines: If one taken with a Quinsey, do, in the beginning of the Disease, Gargle himself with Spirit of Wine, all Inflammation of the Throat will cease in three hours time.

XVIII. Whether a Swallow's Nest be of use? Some disapprove it, as *Mercurialis*, because the Virtue lies not in the Nest, but in the Bird: But grant the Bird be endowed with such a peculiar Virtue, yet it ought not be denied the Nest, because the Nest may have it from the Excrements of the young ones, which are full of Salt. Neither ought it to be rejected for the repellent virtue of the Earth, as *Pereda* doth, because all Earth hath not a Repulsive Virtue; nor is it desired alone, but for the sake of the Dung mixt with it, which is sharp and Discutient, whose sharpness the Earth qualifies. Therefore it is a Remedy most proper to discuss Tumours, chiefly of the Jaws and Throat; especially if the Bird have a peculiar virtue against the Quinsey. If the Quinsey be Phlegmatick, Swallow's Dung used inwardly and outwardly is good: But a bilious one is exasperated by the use of sharp Medicines: It concocts and discusses Phlegmatick Humours, and dries up the superfluous Moisture.

XIX. *J. Tiengius* had a Nun under Cure, that had an Imposthume in her Throat, which was Twenty days before it broke, or she could swallow any Food: He ordered now and then a Clyster of sweet Milk boild with Yelks of Eggs. *Amatus* teaches the same, when the Quinsey is upon the Windpipe and Gullet, that Broths given by way of Clyster are able to nourish: *Celsus* and others affirm the same. We kept a Religious Woman alive in a Quinsey for nine days onely with Clysters, and she recovered of her Sickness. *Brassavolus* comm. ad aphor. 15. Sect. 2.

XX. In a Quinsey Symptomatick of a Malignant Fever, we must doe nothing before the great Heat be laid, the Body evacuated and altered, and the Parts be preserved against the Poyson.

XXI. Then Sleep, as in all inward Inflammations, so in this likewise, must be avoided, to our utmost power; for, according to the Prince of Physicians, in sleep the Blood retires inwards; therefore the Defluxion of the Humours to the part affected may be increased.

XXII. A Learned Man of a Sanguine Temper, inclining to aduſt, was taken with a Bastard Quinsey without a Fever, he swallowed difficultly, and found

some straitness about his Jaws: He tried many things to quiet his troublesome Disease, supposing it came of a Defluxion from the Brain, although there were more signs that that was dry: He Purged his Head often with Pills, he prescribed to himself (for he was a Physician) a Drying and Sweating Diet, he endeavoured to dry his Head with Bags, Plasters, &c. he used Apophlegmatifins, Sneezing, yea, and made an Issue behind in his Head; all in vain. At that time I was following my Studies at Paris, he sent me a Description of his Disease, to shew it to some famous Physicians. I consulted severally with Monsieur *Carolus Buvardus*, Chief Physician to Lewis XIII. with Monsieur *Curæus de la Chambre*, Physician to the High Chancellour, and with Monsieur *Hurdynus de S. Jaques*, Physician to the Hospital of Charity: They well considering the Constitution of the Patient, declared, The Disease was Sympathick, arising from Fumes ascending from the *Hypochondria*, affecting the Top of the Chimney, i.e. the Gullet, and that the tempering and exclusion of Melancholick Humours must be lookt after; they prescribed him Spaw Waters, the use of Chalybeates, an Issue in each Leg, and stopt up that in his head; they order'd Leeches to the Hemorrhoids, and other things to conquer the Melancholick Humours. The Patient consented, who a little after was rid both of his Melancholy and his Quinsey.

XXIII. In this Controverſie I think we must take great notice, whether the Body abound with Blood, either naturally, or because of the manner of living, or of some accustomed Evacuation stopt; for then I think we should bleed in the Ham or the Ankle; and the same day, if the Disease be urgent, or the next, to Breathe the Jecorary, or Cephalick Vein; and if the Disease abate not, we must proceed to bleed under the Tongue. But if there be no such great plenty of Blood, I think it better not to meddle with the Veins of the lower parts; but presently to open a Vein in the Arm, and afterwards to bleed in the upper Veins.

XXIV. But Blood-letting in the Arm must be repeated, not onely because it makes better Revulſion, and causeth less weaknes; but because it is often observed, that there is new afflux to the Part affected, either from some other Part transfusing Matter, that it may ease it self of the burthen where with it is oppressed; or by the Part affected drawing, by reason of its pain and heat.

XXV. And seeing some either in the Working of their Physick, or that they naturally abhor it, are apt to vomit it up again; it is better always to give Potions than Pills or Bolus's: for if they should happen to Vomit either a Bolus or Pills, when they are suddenly and with great Violence forced to the Passage straitned with the Inflammation, there is no small danger of Strangling.

XXVI. Bags that are made up with drying Powders, to discuss in Inflammations of other parts, must never be made use of in the Quinsey, because by thickning the outer Skin, they rather hinder the Cure; Therefore we must rather work with Moistners.

Medicines especially made use of by eminent Physicians.

1. I have used in an Inward Quinsey a Gargarism of Mustard, and have often delivered my Patients from danger.

2. If the Swelling in the Neck will not soften; burn an Owl in an open Pot to Powder, a little of which you may blow into the Throat. The Swelling will soften to admiration, and break. This is a Singular Secret.

3. Duke *Ferdinand's* Powder is a great Secret in the Quinsey. It is made of Mineral Crystal, Cream of Tartar and Sugar. For every half ounce of Crystal, 1 ounce of Cream of Tartar, and 2 ounces of Sugar are taken.

Septanius,
Celsus in præ-
dictum locum
p. 808.

Walrus m.
p. 112.

forestus Obs.
6. in scho-
lio lib. 15.

Hen. Petrus
us in Nosol.
Harmon.

Septalius.
Animad-
vers. lib. 6.
Sect. 113.

Idem. Ibid.
Sect. 114.

Idem. Ibid.
Sect. 115.

Idem. Ibid.
Sect. 116.

Ætius, Te-
trab. 2. Sect.
4. c. 47.

J. Agric.
Chirurg. parv.
p. 802.

Bartoletus,
l. 5. part. 2.
c. 16.

Tho. Bartholins, cent. 4. dist. 73. Blockwiltius, anat. Samb. Sect. 3. c. 12.

Claud. Deodatus.

Hartman, pract. chim.

Platerus.

Eust. Rud. Art. Med. l. 2. c. 42.

Idem, ibid.

Scultetus, Armaten, Chir. Obs. 32.

M. Job. Wittichius, Conf. Med. 23.

4. A Purple Thread, wherewith a Viper hath been strangled, is highly commended for the Quinsy.

5. Let the Water, or Decoction of Elder Flowers, wherein is mixt a little Elder Honey, and a few Leaves, with one or two Jew's Ears, be Gargled. This is recommended by experience.

6. Spirit of Nitre, with Water of the Anodyne Salt, Gargled hot, is most excellent to allay the Inflammation.

7. Take of Houfeleek a sufficient quantity, bruise it and strain it; Take of this Juice 1 pint, Sal Ammoniack half an ounce, leave it in a moist place, till the Salt be dissolved. Distill it by an Alembick. Wash your Tongue often with this Water.

8. Galen, Aetius, Orobafius, and all the Ancients commend Dogs-Turd White, powdered and dried, mixed with Honey, and laid to the Throat.

9. The Juice of Tree-Ivy swallowed gently, from 3 drachms to half an ounce, doth much good by repelling and digesting.

10. This is an Excellent Remedy. Take of Swallow's Nest 3 ounces, Sapa 1 ounce, Pulp of Cassia newly drawn 1 ounce and an half; Mix them, and apply it outwardly: For it digests and asswages.

11. This also is admirable, which is made of the crum of a Loaf, Milk, Flowers of Roses and Chamemil mixt together, and applied after Blood-letting, by virtue of which Medicine they use to spit plentifully, and be much relieved.

12. This Gargarism is highly commended in all dangerous Quinsies, especially in the beginning, if the enflamed Jaws be often washed therewith; Take of Saffron powdered 1 scruple and an half, of the sharpest Vinegar 1 ounce, Plantain Water 3 ounces, white Sugar 2 drachms. Mix them, and make a Gargarism.

13. Sennertus commends the Decoction of Berberry wood, or of the inner Rind of the Hazle.

14. Oil of sweet Almonds new drawn, given with Sugar, and a little of the Powder of a Boar's Tusk, is the most present Remedy for the Quinsy and Pleurisie.

Appetite, that depends upon some fault in the acid Humour, with Acids, and we see that Acids are good almost for all Diseases, but those of the Breast: Spirit of Vitriol is qualified by a mixture of Sulphur; Vinegar is good, and Oranges and Lemons; but people often take too much, and then they fall into gnawing of the Stomach, and much spitting; a little Sugar qualifies them. The season for giving them is in the state of Declination, before Dinner, not before Supper, lest when their Appetite is raised, they eat over-much, and so be not able to bear the Assault of the Disease, which is always more violent toward night, nor to digest your Food; the Seeds of Citrons and Oranges may both be eaten, because of their Cordial Virtue. The loss of Appetite, which arises from decay of strength, is seldom cured, unless that Decay come of a cold Cause; then hot and Aromatick things are proper. In old Men, that through weakness have lost their Appetite, hot things are not so good inwardly, as outwardly: For taken inwardly, in dry Bodies they create greater dryness: Outwardly Oil of Mace is good, and a Toast of Bread dipt in Malmsey Wine.

II. In all Loss of Appetite let the Food be given actually cold; and if possible, let it be set before the Patient when he is not aware of it. Let such use bread well baked, or a good while dried in the Air, or dry Cakes well fermented, and not too close.

III. When any one complains he never comes to his Meat with an Appetite, it is advisable to make him fast till he have a stomach, for starving breeds Appetite. So when a Man cannot get sleep, if he be forced to wake and nod standing, before he be suffered to ly down, he usually falls into a long and profound sleep.

IV. Want of Appetite in Women, not with Child, is cured better by Purging than Letting of Blood, for it arises of bad humours abounding in the Stomach and the whole Body. In Women with Child blood-letting is the better Cure; for it is caused by retention of blood, while they are first breeding.

V. Because Cholera dejects the Appetite by its heat, to cleanse the stomach a Decoction of Tamarinds, soure Prunes, and Sebesten, with syrup of Roses and Rheubarb, should be given: The morrow following this Medicine, two hours before Meal let them drink a draught of cold water, unless weakness of the stomach, or something else do hinder: Let them use soure Sauces, and they may take a Taste of Salt things.

VI. But if Phlegm be the Cause, after Evacuation it is best to give Acids, but with deterfive and salt things; for what sweet things are deterfive, they satiate and are flatulent; wherefore they are not good in this case, unless a great deal of Vinegar be added, so as they may scarce be perceived to be sweet.

VII. For raising the Appetite, which is often dejected in Consumptive Persons, I think there is no better Remedy known as yet, than *Elizir Proprietatis*, if 4 or 5 drops of it be taken in Wine, or some other convenient Liquor, about half an hour before Meal.

VIII. Sometimes I have known the Appetite recover of its own accord: But that falls out for the most part, either because of an exact Diet, which sometime is rightly observed even by chance, or of some notable Evacuations, or Alterations that are spontaneous: For when the noxious humours are conquered and amended, or evacuated, the usefull and necessary ones, by degrees, recover their lost strength, and then exert it.

Anorexia, or Want of Appetite.

The Contents.

Its Cure must be various, according to the variety of Causes. I.

Food must be actually cold. II.

Fasting must sometime be enjoined. III.

Its Cure in Women with Child. IV.

Its Cure, when caused by Cholera. V.

When by Phlegm. VI.

In Consumptive Persons. VII.

When Cured of its own accord. VIII.

Medicines.

I. **W**omen about sick persons desire nothing more than to remove this fault; but they reckon that which is onely a sign of Health, to be the Cause; For this reason oftentimes the Physician is forced to provoke an Appetite: It is lost, 1. Because the Powers are weakned, and the Blood is not well concocted. 2. Because for the former reason the acid Humour cannot be separated, because of the thin Humours that are admitted. (We see this in them, through whose Arteries noxious Humours, together with the acid Humour, are poured into the Stomach, which often deceives Physicians, while they ascribe the cause to the Intemperature of the Stomach) or because it is corrupted and too thin. That the loss of Appetite is to be ascribed to the fault of the acid Humour, appears from this; If the Ail be alleviated by taking Acids. Melancholick persons, who have a good stomach after the use of Acids, seldom recover. We amend the loss of

Medicines

Medicines especially made use of by eminent Physicians.

Detr. Fo-
rest. l. 18.
Obs. 8.

1. I steeped for a night some Leaves of Roman Wormwood, and a Root or two of Dandelion, a little bruised, in Rhenish-Wine. In the morning I strained out the Wine, and gave it my Patient, and (which is wonderfull) he voided a dead Worm and a living one, and his stomach increased to a wonder.

Idem. Obs. 9.

2. Peaches eaten before Meals get a stomach, if it be lost through a hot cause. Syrup of Peaches may be thus made: Take of the Juice of Peaches scarce ripe, 4 Pounds, boil half away, let the dregs settle, then add of Pomegranate juice 6 ounces, Sugar, and a little red Sanders, as much as sufficeth; make a Syrup. The Dose, 2 ounces morning and evening, two hours before Meal. If you want Peaches, you may use Juice of soure Apples.

Fred. Hof-
man, Meib.
Med. p. 379.

3. In the loss of Appetite, through weakness of stomach in the declination of a Disease, Amber, from 1 grain to 5, mixt with *Facula Ari*, is a specifick. Also Ivory calcined without fire is very good.

Eosta. Rud.
Ari. Med.
l. 2. c. 12.

4. The best thing, and which raises an Appetite above all others, is *Antidotus Theophrastiana*, thus described by *Galen*. Take of Smallage-seed 1 ounce and an half, Myrrh, Anniseed, *Opium*, each 6 drachms; white Pepper 5 drachms; Parsly, Spikenard, long Pepper, each half an ounce; Castor, Flowers of *Juncus Odoratus*, Saffron, each 3 drachms; Cinnamon 2 drachms, *Cassia lignea* half an ounce; Mix them with boiled Honey, make an Electuary. Take about the quantity of an Hazle nut when you go to bed, with 4 ounces of Water.

River. prax.
Med. l. 9. c.
3.

5. Balm of Peru is an excellent Remedy for this, if some drops of it be given in *Hippocras-Wine*, or some other, an hour or two before Meal.

true, he perceived the thick, but could not stop them; nor was there any other reason for this, but that the whole Muscle was cut. And, *Aquapendent*, l. 3. de ulc. c. 12. saith, We ought to cut the *Sphincter-Muscle*; yet, with caution, that we cut it not all, but that some portion of it at least always remain whole, lest the Excrements pass involuntarily: Therefore all the Muscle is not to be cut, as *Riolanus* would have it, but some small portion (though never so little) is to be saved whole, lest the constrictive Faculty be utterly lost.

Domini, de
Marche
Anst. lib. 3.

IV. *Condylomata* Swellings of the Anus, so called from their likeness to the knuckles of a Man's fingers) are irritated and grow painfull from the Afflux of the Salt and Serous parts of the blood coming from above: To take away these troubles I have experienced nothing better than to endeavour the vacuation of the Humour, by pricking them. A *Vig-neron Melancholick*, of a thin body, but tall, was frequently troubled in this nature, and found present Remedy in pricking these Tubercles with a Pen-knife.

Severinus,
Med. Eff. p.
82.

V. Many fleshy Excrecences grow about the Anus in Women and Boyes that live at Rome, which some call the *Crested Hemorrhoids*, and are accompanied with Chaps. For curing of which fleshy Excrecences, whereas several have devised several things, we, after trial of various means, have hitherto found no safer Remedy, than to clip them off: for, when they are cut off, the Sores they leave are quickly cured. But the Chaps are healed with Ointment of Lead, and other very drying things. Some cure these *Crested Hemorrhoids* with Waters made of Styptick things, as Allum, Tartar and Sublimate. Some use Goldsmith's *Aqua fortis*: But the first way of Cure is safest, seeing it brings but little pain, and almost no symptoms with it, as we have tried by long Experience.

Amatus,
Cent. 2. ca.
rat. 87.

Diseases of the Anus.

The Contents.

The Way of putting it up when fallen. I.

We must abstain from too much Astringents. II.

We must spare the Sphincter in curing the Fistula. III.

The Cure of the Condylomata by pricking. IV.

The Cure of the crested Hemorrhoids by Excision. V.

Medicines.

Barbette,
Cirurgie,
cap. 9.

I. I Will propose a Way of Cure, which, at first sight, will look ridiculous, but what is of great use in the falling out of the Arse-gut. Slap the Buttocks of your Patient with your flat hand five or six times, or oftner, that the Muscles *Ante-Levatores* may immediately draw up the *Intestinum rectum* into its place: But before you thus beat your Patient, it is requisite you anoint the *Intestinum rectum* with oil of Roses and Myrtle.

Platerus.

II. In curing the falling out of the Arse-gut, you must abstain from too much Astringents, lest by making the Body Costive, and therefore causing greater straining, you rather promote than hinder the falling of it out.

III. *Riolanus*, *Anthropogr. lib. 2.* reprehends almost all modern Surgeons in curing *Fistula's*, which are very often bred in *Ano*, and pass the *Sphincter-Muscle*, and sometime go above it; for he affirms, the whole *Sphincter Muscle* may be cut, because, saith he, this Intestine cut is easily healed: for, seeing it is Fleh, it must be united. We also acknowledge it may be healed: We deny that the constrictive Faculty can be preserved; Whence it is, that the Excrements cannot be retained, as I have often observed, and especially in a Shoemaker, all whose *Sphincter-Muscle* was cut across, and then united: Yet the thin Excrements came away without his knowledge; it's

Medicines especially made use of by eminent Physicians.

1. In the falling out of the Arse-gut I always use warm Brine, and it does very well.

Arius, te-
trab. 1.
Serm. 4. c.
24.

2. It is reckoned a powerfull and singular remedy, which is made of 12 red Snails, put in a Pot, with Salt and Allum, of each half an ounce strowed on them, shaken a pretty while: for when they are dead, there will be a liquor at the bottom, which, soaked up with Cotton, and applied to the Gut, keeps it up.

Hartmannus
Prax. Chym.
art.

3. If the Gut formerly put up will stay by no means or art, this is a present Remedy. Take the Ashes of *Scarabei pilulares*, strow them on the Gut that is down, put it up as well as you can, it will never come out more, especially if for some time you use a decoction of Self-Heal Root.

4. Soot of Chimneys mixt with the White of an Egg, and applied, is good.

Eustach. Ru-
dius.

5. For the *Fistula in ano*. Take 3 drachms of the following Powder, boil it in Barley-water, or if you will have it more detersive, in Water and Honey, then inject it into the *Fistula* with a Syringe. The Powder is made thus; Lead is beaten into very thin Plates, these cut into very small pieces, are steeped in very sharp Vineger for three days, changing the Vineger every day, when they are taken out and dried, without burning, they must be laboriously beaten in a Mortar, to make them into a fine Powder, which strowed on Malignant Ulcers, doth gently correct, purge, cleanse and heal them without Pain, and with admirable Success.

Horatius
Augenius,
Tom. 1. l. 12.
Epist. 6.

6. To dry the Excrecencies, so as they may not increase, nothing is better or safer than the use of *Crocus Martis*.

J. Crato,
l. 7. Conf. 12.

7. The *Rbagades* and *Condylomata* are cured with the Oil of Chamæmil, and of Eggs, wherewith, if you mix Balm of Sulphur, you will have a more efficacious Remedy.

Petrus Joh.
Faber. l. 3.
de morbis
ani.

8. If

Joh. Stokerus
pract. morb.
partic. c. 88.

8. If they be rebellious, this is a good remedy; Take quick Lime, mix it with Honey, dry it in an Oven, so as it may be powdered: Anoint the part, and strow on the Powder, they will fall off and be removed.

Aphonia, or Loss of Speech.

Lanfrancus,
tr. 3. doct. 3.
cap. 18.

I Cured a Woman, that had been Speechless Seven years, with a Caustery made in the *Coronal Sure*. Neither were Evacuations, nor Unctions, nor any other Remedies able to doe any thing towards perfecting the Cure, till the foresaid Caustery did the work. And before I closed the Caustery, the Woman had a clear Voice: for she had lost her Voice by an old Catarrhe coming from her Head.

Medicines especially made use of by eminent Physicians.

Tennet Pa-
ralle, de A-
phonia.

The best way is presently to give a Vomit of White Vitriol, and Salt of Vitriol in a draught of warm Beer, and a little Butter.

Aphthæ, or a Thrush.

The Contents.

Its Causes and Cure. I.

Its Cure differs from the Cure of other Ulcers. II.
Medicines.

I. **E**VERY Thrush hath its Rise from an offending Acid, and indeed usually rising from the lower Parts by the Stomach and Gullet; seldom brought into the Mouth with the Spittle. Therefore a Thrush always indicates some sharp Acid doth offend in the body, to which we must have a special regard, not onely because of the Thrush in the Mouth, but because of the Acid in the body, which doth or may produce other mischief in the body, from which there is greater danger of Life, than from the Thrush, which may endanger a Man's life by straitning the Jaws, and hindring breathing and swallowing. Its Cure therefore consists in the following Particulars. 1. In correcting and amending the Acid Humours and Vapours that are brought to the Mouth, which not onely corrode its *Superficies*, but the inner Coat of the Gullet also, and produce infinite Ulcuses. 2. In the Diminution, or Expulsion of the foresaid Humours, when corrected. 3. In hindring a new production of them. 4. In clearing the Parts affected, in ripening and promoting the fall of the Thrush. 5. In cleansing and healing the Parts cleared. And although many have no regard to the Correction of the peccant Acid, because the knowledge and doctrine of sharp things among Physicians hath hitherto been confused, one onely name of Acrimony being known to them; Yet now a twofold, and indeed contrary sharp, being by me discovered, and now for some years confirmed by the Experience of several, regard must be had to the force and Mischief of each Acid, and to the best correction of it. And amongst many things which use to correct, or allay, either or both the Sharps, every thing deserves commendation in curing the Thrush, that concentrates the Spirits, and that does it gently; Amongst which are Crabs-Eyes, Pearl, Coral, White Earth, Bloud-stone, &c. which may be made choice of according to the Diversity of the Thrush, and the peccant Acids: For example; When the Mouth is not onely ulcerated, but the Tongue also chapt with extreme heat, and other

parts in like manner affected, so that the very bloud runs out; Bloud-stone and Dragons-Bloud are proper. When a Thrush comes without such driness of Tongue, Crabs-Eyes and Pearl will be the best to temper and correct the Acidity, for they gently concentrate; and what I have mentioned hitherto doe good in allwaging and destroying the noxious Acidity. *Bergarticum minerale* is also good. Medicines that purge Phlegm diminish, and carry off these humours, when they are corrected as much as can be; for all pure Acid humours are found to be like *Serum*, and no wonder if they be joynd and confounded with other humours, as Phlegm and Choler; and so it is not absurd to carry them off by Specificks. This is the reason why in curing the Thrush in Children we so frequently use Syrup of Cichory with Rhubarb; because Choler is also corrupted, and, by the very sharp Acid is made eruginous. To say nothing now, that all humours are purged by any Purgative, although I think that this or that humour is more easily and plentifully purged by some certain Medicines, than by others. The production of Acid humours, as it depends especially upon the use of Meats, Sawces and Medicines, that are Acid, as also of a cold Air, Grief, or Terroure of Mind; so this same production may be hindred, both by abstaining from such things, and by using those that are more oily, or more fat and spirituous, by the enjoyment of a more serene and warm Air, and by recreating the mind with gratefull and delightfull things. And, as the Original of Acid Vapours is owing to the effervescency, caused by a very sharp and powerfull Acid, so the vapours will be hindred, when the said vitious effervescency is corrected or hindred, both by things which concentrate the potent and exceeding sharp Acid, and by things which otherwise take off its edge. Chalk, Dragons Bloud, and the like, do powerfully concentrate a sharp Acid: Fat and oily things take off its edge, especially *Opium*, and all Narcoticks; but I prefer a Metallick, or Mineral Sulphur fixt, above all, in comparison of which, nothing I have hitherto tried does so kindly, certainly, speedily and safely restrain these vitious effervescencies. The parts affected may be cleared of the Thrush by maturation of it, and by its spontaneous Fall, promoted by Medicines, that kindly temper the Acid Acrimony, which accompanies it, and that draw the Acrimony to themselves, amongst which the juice of baked or boiled Turneps is deservedly commended with a little Sugar: Though less be needfull, when they are baked, for the juice that comes out of them then is in consistency and taste like a thin Syrup. The Patient must wash and gargle his Mouth and Throat often with this juice; or hold it a little in your Mouth and swallow it by degrees; which I prefer, because not onely the Mouth and the Parts therein contained have the benefit of it, but also the whole Gullet and the Stomach, which are not less troubled with the Thrush than the Mouth. And this should be done in Children especially, in whom we cannot expect Washing and Gargling. Besides, seeing this peccant Acid is kindly and effectually tempered by this juice, it is also corrected in the small Guts, and its ascent is hindred, and the Disease is sooner cured. Divers Syrups are also used, as solutive Syrup of Violets, Jujubes, Syrup of Liquorice, &c. which I think doe good, in that they take off the edge from the noxious Acidity by the mucilaginous juice of the Plants of which they are made: I must needs commend the yelk of an Egg mixt with a little Rosewater and Sugar, for it draws to it the Acid humour that hurts the Stomach, and so by degrees clears the part affected, and promotes the fall of the Thrush: You may use it as the Turnep juice: Some commend Beer with slit Figs boild in it: Yet I have observed it ingratefull to some, because of its great Glutinousness. While the Thrush is ripening, that is, gradually falling

Sylvius de le
Boë, Appen.
Traç. 1. c. 5.
Sect. 50. &
59.

from the Parts disaffected, a new Cuticle grows under them, and covers the Parts: And although this follow of its own accord, and by the benefit of the Medicines now commended; yet it will be promoted by the Syrup of red Roses, Honey of Roses, and the like. Also Bole Armenick, Terra Lemnia, &c. ground fine with a little Plantain Water and Sugar, may be held in ones Mouth, and the last part of the Cure, i. e. healing it, be hastened.

II. This is remarkable, that the cure of other Ulcers is promoted, when they are dried by degrees, and little Humour comes from them: On the contrary, there is hopes in a Thrush, when it is moist, and when one spits as if he were in a Flux: For then the Thrush is cured with more speed and ease. Wherefore, as in curing other Ulcers, Medicines are commended, that temper the Acid Acrimony, and then dry; so Medicines on the contrary, are good to cure the Thrush, which are gentle, and temper the Acid Acrimony; but they must also be moist.

Idem. Ap.
pen. Traç.
10. Sect. 2.
§5. & 286.

Medicines especially made use of by eminent Physicians.

Ætius.

1. This helps Children wonderfully; Take Galls and beat them, boil them in Water, to the Decoction strained add an equal quantity of Honey: Make it so thick, that you may be able to rub it long enough on the place with your fingers.

Idem.

2. Fennil Root burnt, applied by it self, or mixt with Honey, is very good.

J. Cafl.
Baricellus.
Mort. genial.
p. 145.

3. Thomas Thomafius, in his Idea, mentions a tried Remedy, how with wonderfull success and skill he hath cured the Thrush, with no other thing than the Decoction of Cinquefoil Root.

Wolf. Ga.
belchoverus,
cur.

4. Petrus Angillata Writes, how he hath cured a hundred Thrushes, with Savory boiled in Wine, to wash the Mouth. It cures the Patient in two or three days.

Rud. Gocle-
rius, Experi-
mentar. c. 15.

5. For the Thrush in Children; Take of Allum, Sugar, each half an ounce, boil them in Plantain Water, add of Mulberry juice what is sufficient, wash the Mouth often, it will doe much good.

Joel, Oper.
Med. Tom. 2.
Sect. 7.

6. The most present Remedy for the Thrush, both in young and old, is this; First wash the part well, then lay on the following Liniment. Take of Honey of Roses half an ounce, oil of Vitriol 1 drachm; mix them, make an Ointment.

Herc. Saxo-
nia. 1. 2. p.
c. 25.

7. If the Ulcers be Malignant, I use either Water of Tartar, or Vitriol, wherewith all malignant Ulcers are conquered.

River. pran.
Med. 1. 6. c.
5.

8. If there be no Inflammation, the onely and best Remedy is Spirit of Vitriol, or Sulphur, which in those that are grown may be used alone. Dip a little Cotton, bound to the end of a stick, in it, and give the Sore a light touch: for so a simple Thrush is cured in a moment.

Sennert, 1. 2.
p. 1. c. 18.

9. In Childrens Thrush this is an approved Remedy, especially when it is malignant and Epidemick; They hold a living Frog to the Child's Mouth, that it may draw out the Malignity, which when it is weary and dead, they hold another, and so on; but this is a filthy Medicine.

Shaking the Body, and stirring them up to walk, when proper. IX.
Plucking the Hair, bending the Fingers, rubbing the extreme Parts, &c. whether of any use. X.

Whether a Man should be Purged. XI.

Violent Purging is convenient. XII.

Whether a Vomit may be given. XIII.

The Vomit must be strong. XIV.

Clysters must be very sharp. XV.

Suppositories should be given frequently. XVI.

Apoplegmatisms of Hiera to be rejected. XVII.

Vinegar should not be mixt with them. XVIII.

Whether Sneezing be proper. XIX.

Whether Fumes be proper. XX.

The Efficacy of Stillatitious Oils, and Volatile Salts. XXI.

The great Antidotes are not always proper. XXII.

Whether for the Cure a Fever should be raised, and when it succeeds the Apoplexy, whether it should be extinguished. XXIII.

An Apoplexy negligently cured, of a small one became Mortal. XXIV.

What Posture is best. XXV.

They that are past Hopes, are not to be quite given over. XXVI.

Medicines.

I. I Judge a Man may, nay must, according to Prudence and Art, let blood in every Apoplexy, according to the Constitution of the Patient, and quantity of blood in the Vessels, and that plentifully. For so the Patient will endure the longer, and the Apoplexy will be easilier cured, as experience testifies; without which I know not, whether upon consultation, one would not be afraid to let blood in ancient people. When therefore the Physician dare not let blood, experienced persons advise well, that Scarification should be used, or at least Cupping with Scarification, in stead of blood-letting. And because so great a Man as Sylvius relies here altogether on Experience, but remains dissatisfied in his Theory (as who pleases to consult the place cited, may see) I think it very pertinent to consider how exactly the excellent Wesper hath laid down the Theory: For, to discover so abstruse and latent Causes, he produces Anatomical Histories, or Observations, wherein the Phenomena in Bodies of several, who died of this Disease, are declared. In three that died Apoplestick, the extravasated blood was either gathered here and there into great Clods, or had discoloured the substance of the Brain all over; in another a Flood of Serum had overflowed the Brain within and without. From these marks of this most occult disease thus discovered, the Authour concludes, the places principally affected are not the large Ventricles, but the medullous substance of the Cerebrum, and the Cerebellum, which is every way porous, and furnished with narrow passages, as well that Vital Spirits may flow thither from the blood, as that the Animal may flow thence. And indeed he concludes, that the Cause of every Apoplexy wholly consists in these Two, i. e. in one alone, or both together, namely, either because the Afflux of blood, through the Arteries to the Brain is denied, or the Efflux of Animal Spirits from the Cerebrum and Cerebellum, through the Nerves and Spinal Marrow, is stopt; or for both these causes. As to the First, he proposes how the blood may be stopt three ways, i. e. First, Either by reason of the Obstruction of the inner Carotid and Vertebral Arteries, which happens in the bigger Vessels, and especially about the Ascend of the Cranium, from blood concrete into grumous Lumps; or in the lesser Vessels, which cross the Brain, from their being stopt with viscid Matter. Or Secondly, The influx of blood is kept from the Brain, by reason of the Compression of those Vessels; which sometimes happens, when the Paristhmia, or Glands of the Neck are so swelled with Serous humours, that by pressing the Arteries that pass under them, they stop the passage of the blood to the Head. Or Thirdly, The Afflux of Blood may be hindered, when a Vessel being opened within the Cranium, the blood is plentifully poured out, which should otherwise go to the benefit of the Brain. As to

Sylv. de le
Boë, Fran.
1. 2. c. 27.

Apoplexia, or the Apoplexy.

The Contents.

Whether Blood must be let. I.

The Jugular Veins may be opened. II.

When Fomentations must be used before Blood-letting. III.

Blood-letting not good for all. IV.

A Sanguine Apoplexy cured by bleeding in both Arms at once. V.

Where Cupping-Glasses should be applied. VI.

The Efficacy of Cupping applied to the fore-part of the Head. VII.

Cured by Blisters. VIII.

to the other Cause of the Apoplexy, i. e. the hindring the spirits in the efflux, he reckons it is caused two ways, either by obstruction of the Origination of all the Nerves, caused by ferous Matter; or by sudden Compression of the same, which either too great gathering of blood in the *Meninges*, or in some certain parts of the Brain, or in its Ventricle, or some phlegmonous Disposition do produce. Seeing the Apoplexy, according to the opinion of the Moderns, consonant to the doctrine of *Hippocrates*, arises from the stoppage of the Circulation of the blood, or, as he speaks, from the standing of the blood; and nor, as *Galen* would have it, from the oppletion of the Ventricle of the Brain. All hope of safety consists in a speedy revulsion and retraction of the Matter from the Head; nor can there be found a Remedy, which can so speedily avert, derive, nay and evacuate the humours from the Brain, as Letting of blood; therefore we prefer it before all other means in curing the Apoplexy, and we think it proper for all Individuals, whether they be plethorick or no. The thing it self speaks, for several Apoplectick persons have been restored, and perfectly cured, onely by letting of blood. When the blood is taken from the Arm, that also in the Jugular Veins is drawn downwards, and then comes some portion of the Matter that is in the *Sinus's*, which although often it be phlegmatick; yet it is found not without blood; but may be removed and drawn back with it. And for that cause, unless some weighty reason hinder, we order large blood-letting in Apoplectick persons, which may reach the humours above, and remove them, and sometimes we repeat it twice or thrice in each Arm, that the Veins being emptied on each side, may draw down the humours more powerfully from the Jugular Veins. Nor need want of strength be much feared, which is here oppressed, not wasted. As for cooling the body, and thickning the humours, for which some reject blood-letting, it is of no moment, for in the Apoplexy, nothing is more necessary than Revulsion and Turning the Matter away from the Head, and we must especially labour to doe it presently, which Indication blood-letting quickly answers; Wherefore, we may hope for more benefit from translation of the Morbifick Cause, than we need fear damage from cooling of the Body.

II. After the universal Plenitude is abated, by letting blood in the Arm, the Parts especially affected are to be relieved, for which purpose the best means is opening the Jugular Veins, out of which, by reason of their bigness, the blood runs freely, which by stagnation oppressed the Brain; and by this discharge the Lungs are less oppressed; and when less blood comes to them, they easier deliver what they contain, to the Arteries and left Ventricle of the Heart, and the Current of the blood being render'd more free, Coagulation is hindred, Obstructions are opened, and the Animal Functions are by degrees restored. Concerning opening of them, Experience seconds Reason; and these Veins may with more ease be opened, because in this Disease, they being swelled, there is no need of Ligature, which in this case might doe harm, and therefore, after opening of them, must not be too strait, but *Emplastrum Galeni* must be applied to the Orifice.

III. When there is no *Plethora*, but great store of sharp humours, i. e. much fowre Melancholy, or its Exaltation hath caused the Apoplexy, which foregoing pains do shew, *Hippocrates* bids us use Fomentations before blood-letting, nor without reason; for when the Veins are inflamed, dried and straitened, and the blood by degrees coagulates, if we withstand these things by emollient, heating and attenuating fomentations, the blood will run more freely, and with its rapid motion will wash what was beginning to coagulate from the Capillary Vessels dilated and softened, if presently after the Fomentation, or in the very use of it a Vein be open-

ed: Otherwise, it is to be feared, the thinner part of the blood may come away by blood-letting, while the thicker, and what begins to coagulate, stays behind, which will hinder the effect of the Purge which should then be given. The Head especially should be bathed, seeing in it there is the greatest danger from Coagulation; and next the *Hypochondria*. But both Fomentations and blood-letting should be used in the beginning of the Disease, while the spirits are yet elevated.

IV. There is scarce a Practical Physician, but advises blood-letting in an Apoplexy caused by blood. But I question whether it be proper in every Apoplexy, as the excellent *Nymannus* thinks: For he, in favour of his Hypothesis, which takes every Apoplexy to be caused by Obstruction of the *Sinus's*, is very large in commendation of blood-letting; which Hypothesis, since it does not hold true in every Apoplexy, as I have proved, the like and perpetual use of blood-letting may be questioned. It's evident, when the Vertebral and Carotid Arteries are filled with fibrous bodies, that blood-letting avails little: And those Apoplectick persons are in the same Case, who have the *Torcular* stop, seeing it cannot wholly be obstructed, except by some such like body. Nor likewise will blood-letting be convenient, when *Serum* is gathered in the Ventricle, and Cavity of the Skull, since by it the immediate cause is not removed; but the strength otherwise spent, is more weakened. In an Apoplexy, where a Vessel is broke, there is no hope; both because a quantity of blood poured into the Ventricle and *Basis* of the Brain, cannot be got back by Art, and because while it stays there it is coagulated. In that which is caused by *Serum*, gathered in the substance of the Brain, what good blood-letting does, it is by accident, namely, as it abates the Turgescentcy of the blood and *Serum*. Therefore this alone will not remove the Apoplexy, but we must also use things that spend and evacuate, the *Serum*, which moistens the medullous substance. But blood-letting in an Apoplexy, caused by a sudden Obstruction of the little Arteries, is good in many respects; for first the preternatural violent motion of the blood is stop, which often is the occasion of this Obstruction; and it runs in less quantity to the Brain; for instance, when the blood is taken out of the Arm, no small portion makes to the Arm by the Axillary Veins; that so what was taken away may be supplied: Then the blood hastens from the whole body, and from the brain, towards the Heart, to assist it, thus depauperated and spoiled by blood-letting: And the heart eased of the burthen wherewith it was loaded, both before and in the Paroxysm, disperses the blood as it returns, more chearfully, in better order, and in quantity more usefull to the brain, which forceth and washeth out what caused the Obstruction and Trouble in the medullous substance, and drives it into the Capillary Veins adjoining to the extremities of the Arteries.

V. Blood abounding in the head cast a full-bodied young man into an Apoplexy, with Trembling, loss of Speech and Ratling, three most dangerous concomitants of this Disease. Wherefore speedily to abate these violent Symptoms, he was immediately bled in the right Arm, but not bleeding so freely as his extremity required, the same Lancet was used to his left Arm, and when both had continued bleeding for some time, his Ratling evidently abated, he took his breath better, and quickly was cured.

VI. Cupping with Scarification should be applied, not to the shoulders and back, as the *Arabians* advise; because there is no remarkable Vein that reaches the Brain: But they should be stuck near the Jugulars, and under the chin, if possible. For these Topick Remedies should be applied, not onely upon the Veins that reach the part diseased, but upon the next and largest, if the constitution of the Part will permit it.

Gr. Nymannus, Trad. de Apopl. p. 217.

Fr. Bayle, Trad. de Apoplexia, c. 11.

Wepferus, Exercitat. de Apoplexia, p. 213.

Tulpius, c. 7. lib. 1. Observat.

Redacted.

VII. A large Cupping-glass may well be applied to the top of the Head, seeing it draws the blood out of the *Sinus* of the *Dura Mater*, opens Obstructions, and raises the subsiding Brain. With which opportune Remedy *Pracasterius* remembered how he had once cured a Nun, at that very time when he himself being seized with a small Apoplexy, made signs by putting his hand to his Crown, that he would have the like remedy applied; but they that were by not understanding him, and his Disease increasing, about night he died.

Horsius, in
Probl.

VIII. A Man of Threescore fell down drunk, and confused the hind part of his head, but his Skull was whole, and he was taken with a true and violent Apoplexy. While all despaired, I tried to cure him; I shake him violently, I give him a sharp Clyster, and make it work with a sharp Suppository, there was plentiful Evacuation. When his head was shaved all over, I applied a Cataplasim of Pigeon's Dung, *Euphorbium*, *Pyrethrum*, and Mustard; hereupon many and great Blisters arise, out of which yellow matter ran. The next day I gave him of *Species Hiera Diacolocynthidos* 2 drachms, of Castor half a drachm, of Rue one scruple, with Antapoplectick Water: I applied Cupping with Scarification to his Shoulders; when the Blisters in his head ran no more, I raised new ones in his Neck, and thereabout, but onely with Cupping-Glasses: And with some few more Remedies he recovered his health.

Heers Obser-
vat. 21.

IX. *Forseus* lib. 19. *Observat.* 74. condemns shaking of the body in Phlegmatick and Sanguine Apoplexies, and because the humours are thereby more stirred, he advises to use it with caution. Which not being observed in old *Bokellus*, b. c. the Imprudence of the Physician cost the Patient his life. *Nymanus*, in Chap. 39. of the Apoplexy, mentions a Patient, that had his end hastened by such unseasonable shaking. The shaking of the Womans body, mentioned by *Forseus*, as the Ail appeared, without using any thing before it, quickly cured her; which, in others, if it had not caused Death, it would at least have done hurt, and exasperated the Disease. But this shaking, and causing her to walk, seems therefore to have done good, because by shaking her body her blood was stirred, which being provoked to more violent motion, forced that little, which caused the Obstruction already, and would have caused more, out of the lesser Arteries, and drove it farther into the small Veins; whereupon some portion of it, i.e. the more subtil, and the matter of the Animal spirits, was able to sweat through the Pores into the Substance of the Brain, and she at the first was able to walk again. Upon her walking more plenty of Vital Spirits succeeded, while Nature used her utmost endeavour, being excited by stirring, to supply the Medullous Substances; and her blood being not a little heated and made more subtil by walking, it could more readily pass the Capillaries, and the Pores. But if the Paroxysm had had its original from the Serous Moisture poured into the substance of the Brain, it had not ceased so soon, and there had been other symptoms, as Sleepiness, *Vertigo*, &c. Nay, by walking, being farther driven into the Medulla, it would have bred a Palsie. In any Apoplexy likewise, bred of any other cause, it would hardly have done so much good. For either if it be caused by the Carotid and Vertebral Arteries being stoppt, or by the *Torcular* being stoppt by pituitous Bodies, or by extravasated blood, in any of these cases more powerfull Remedies are necessary.

Wepferus
Exercitat. de
Apoplexia.

X. I cannot chuse but examine, as I have occasion, some sort of Remedies, commended by some, namely, whether they avail any thing in the Cure of the Apoplexy, or no. And in the first place plucking the Hair, especially in the Legs, is commended, which, when the Patient wants sense, seems to me plainly ridiculous, for it conduces nothing to the removing any one cause of the Apoplexy; Bending the Fingers, and Twitching the Nose is of the same

nature, nor do I see what good they can doe. And shaking the body, unless the head hang downwards, that so the humours offending may run out, will contribute nothing but evident Damage to the Patient. So rubbing the extreme Parts with Vinegar and Salt, and Ligatures, will doe no good in any Apoplexy. It is better therefore to abstain from such things, as have no use, nor doe the Patient any good.

Sylvius de
le Boe. l. c.

XI. Some question Purging for two reasons. 1. Because Purges may not be given so long as there is crudity, according to *Hippocrates* and *Galen's* Maxims. But without doubt, Crudity, properly so called, which might hinder Purging, is wanting here; yet if there be any suspicion of a thick Humour, Attenuatives may be mixt with Purgers, for the greatness of the Disease, and the Imminence of the present Danger will not allow a Man wholly to intend the Preparation of Humours. 2. The way whereby Purgers should get into the Belly hinders Purging, when one has not power to swallow without fear of choking; Therefore a strong Medicine in a little Dose may be given, as *Trochisci Albandal*, *Diagridium*, or Scammony with Castor, according to *Trallianus*; *Rondeletius* gives a drachm of *Pilula Cochiae* dissolved, according to *Sennertius*. Seeing the chief cause of the Apoplexy is Melancholy offending in quality, i.e. in excess of Acidity, or Acerbity, it is evident that the Humour, seeing it is preternatural, doth indicate its own Evacuation, and the rather, because of the present danger; nor can there be, even in a long time an alteration from Acidity to a more benign and spirituous, or Balsamick nature. And much more yet is Purgation indicated, if a Phlegmatick be joyn'd with the Melancholick *Cacochymie*. Nor doth Purgation allow any longer delay after blood-letting, when the Plethory is taken from the whole, or from the head, than blood-letting allows after the invasion of the Apoplexy, unless extreme faintness require time to recruit. Wherefore Purging is to be prescribed quickly without any respect to time: for unless while the blood is made more fluid by Venesection, and the obstructions of the Brain and Lungs are in some measure removed, or the Increase of them stoppt, and while the Spirits are yet elevated, a Purge be given, when the Coagulation of the blood is sensibly increased, the Cohesion of the Parts of the blood, and of the humours mixt with it, among themselves may be so pertinacious, as to bid defiance to all the virtue of Purgatives; Nay, the distribution of the Purgative, especially to the Parts affected, may be prohibited, if not wholly, at least in part, while the Passages are straitned by Coagulation of the Blood.

Franc. Bay-
le, Traict. de
Apoplexia
c. 11.

XII. Nor may every Medicine be given, but a violent one, such as the nature of the peccant humour, the disposition of the blood, and the place it self do indicate. To the first *Aphor.* 9. *Secl.* 4. hath respect, You must purge Melancholick persons violently by Siege; for Melancholy will not stir, except it be forced from the other humours by a strong Drench. But the Coagulated blood, or next door to Coagulation, parts not easily with what it contains; but stands in need of a strong Ferment to make it boil, and endure a separation of parts. And seeing the humour to be removed is not in the Stomach, and first ways; but in the whole Mass of blood, and in the Brain especially, it is necessary that the virtue of the Purgative be diffused all the Body over, and reach the Head in its full force, to which a weak Purgative can never attain.

Idem.

XIII. It often happens that the Faculties are so oppressed, that Purgatives cannot be brought into Act, and so operate nothing at all, which is an ill sign, and such persons usually die. But because, according to *Celsus*, Many things may well be done in a dangerous case, which should otherwise be omitted; therefore, when the foresaid Remedies avail not, we may come up to Antimonial Medicines, especially those that are

are less violent, such as *Aqua Benedicta*, made of *Crocus Metallorum*, which Purging both upwards and downwards, brings away so great a quantity of Phlegm, not onely from the Stomach and lower parts, but from the Brain, that sometime the Patient is cured by this Evacuation; For I can truly testify, that I saw a Nobleman cured of an Apoplexy thrice in two years by this onely Remedy. And although some condemn the use of Vomits in these cases; yet we must rather trust experience, which teaches us by daily experiments, how comatous Children are with more speed and safety cured by Vomitive Salt of Vitriol, than by any other Remedy.

Riverius.

Francisc.
Bayle, Traſſ.
de Apo-
plexia, c. 11.

XIV. Here I must take notice of a frequent Error in giving the Emetick Wine: For timorous Physicians prescribe it in too small a Dose, i. e. an ounce, or an ounce and half at most: and when they are frustrated of the effect expected, they blame and disparage the Medicine; whereas, to persons grown, and of any strength, it should be given to about three ounces in an Infusion of *Senna*.

XV. *Waleus* saith, that in the Apoplexy Clysters may be so strong of *Coloquintida*, that they fetch the very blood. Nothing hinders it, for Life must be saved, and this Damage may easily be repaired: And it may the better be done, if the Apoplexy were caused by too much blood.

XVI. The Belly, for Revulsion sake, and to excite the dull Faculties, may be provoked by administering sharp Clysters and Suppositories, whereas otherwise they would scarce go to stool. Suppositories, because they provoke exceedingly, and are quickly made, and by reason Clysters cannot be kept for Senselessness, are very convenient, and should often be repeated; in which some burning hot things, since the Patient is without Sense, will doe no harm.

Platerus.

XVII. Some rub *Hiera* and Purging Electuaries on the Palate, to no purpose, in stead whereof it were better to use *Confectio Anacardina*, which inflames a little.

Idem.

XVIII. We rub the Palate with things that bring away Phlegm; yet in that Quantity and Form, that if they should fall on the *Aspera Arteria*, they may not choak. Take of Mustard-seed, long-Pepper, Pellitory of Spain powdered a like quantity, mix them with as much Honey, juice of Rue, and Horseradish, as is sufficient to makethem into the form of an Ointment. We leave out the Vinegar, which some put in, because it abates the strength of sharp things, as we see in Onions and Horseradish, if they be eaten with Vinegar.

Idem.

XIX. Although the humour causing the Apoplexy cannot be cast out by Sneezing, because it is not contained in the Ventricles, yet in this most grievous and dangerous case, we must try every thing, that may remove the Matter. However, before Purging, it is suspicious, because by the motion of the Head and Breast there is a greater afflux of humours. We may anoint the Nostrils with the same we anoint the Palate withall.

Platerus.

XX. Some provide Fumigations, but they are not at all to be commended, for they are dangerous to those that have difficulty of Breathing: It is better to hold a little Rue, or Castor, or *Galbanum* to the Nostrils. Some highly approve a Fume of Amber made immediately; how destitute such are of Reason, learned Physicians can abundantly shew.

Bondeletius.

Crato.

XXI. Things taken inwardly are not to be neglected in the very beginning, which encrease the Effervescency of the Blood, refresh the Spirits, and raise the deficient Heart, in Plethorick persons especially after blood-letting, in others both before and after: The most spirituous, and which abound with volatile Salt, are best; Such as are several sorts of Apoplectick Waters, Spirit of Wine Tartarified, distilled Oils of Anniseed, Rosemary, Sage, Cloves, and the like, with some Cephalick Water. Volatile Salts especially bring great and present benefit, that

are separated and cleansed from all concretion of their Body, such as are the volatile Salts of *Sal Ammoniac*, Soot, Blood, Hartshorn, and (which exceeds them all) the volatile Salt of Vipers. These Salts quickly pass through the whole Mass of Blood, and render it more fluid, they infringe the force of Acids, and dissolve grumous blood.

Bay. Traſſ.
de Apoplexia

XXII. There are some who give Treacle or Mithridate to drink, but under a great mistake, because all the virtue of the *Opium* will not be lost, though they be never so old. To say nothing of the many Astringents are in them, the strength whereof, although it be qualified, may be suspected; because the humour, that is the cause of the Disease, and moistens the body of the brain, is more deeply impacted by these Medicines. It is better to give a Scruple or two of Castor, which, because of its unpleasantness, less hurts the brain.

XXIII. When a continual Fever (for one Intermittent presages Death) accompanies the Apoplexy, as it should do, it needs no other help. If it be too low, it increases the Disease; if too high, it spends a Man. For a Fever cures no other Apoplexy, than that which comes of cooling the blood, of crude humours, and a flatulent spirit. But here the Prudence of the Physician present is required.

Crato in
Conſil.

XXIV. One taken with an Apoplexy was raised by rubbing and Motion; a Fever followed, gentle enough, but with a *Delirium*. Being negligently cured, and not raising what fell upon his Lungs, he died the ninth day after his Fever, and the tenth after his Apoplexy.

Hollerius,
lib. curat.
Sc. 29.

XXV. The question is, about the Posture of the Patient, namely, Whether he must presently be put to bed, or be kept up a while: Some very carefully observe the latter, nor without reason, because certainly there will be a greater propensity to sleep in bed, and the blood by the heat of the Clothes will be in a greater ferment, and the more it blazes, the more recementitious matter it discharges into the diseased Brain: On the contrary, while the Patient is thin clad, and set in a Chair, the blood runs slower, and while the Vessels subside, they seem fitter to receive the humours from the Head, than to send more thither. Wherefore, if the Patient have strength sufficient, perhaps it were better to sit up six or eight hours, till the flux of the morbid matter be past, and the course of the blood be made more sedate, by letting of blood, and by other remedies carefully administered. But such as are weak, and of a tender Constitution, must, as soon as they are seized, be laid on a bed, either in it, or upon it. His posture must be not on his back, but with his head a little raised, and turned sometime on one side, sometime on the other.

Willis, de
Apoplexia

XXVI. They that are stricken immediately with a deprivation of Pulse, and Respiration, and a little after, when they are cold, seem to have breathed their last, must not presently be laid out, and left destitute of the help of Physick. Moreover, were there no hope of life at all, they should not be buried for three or four days: Because such, sometime, either of themselves, or by the use of Remedies, come to life again: Which certainly comes to pass, not because the Vital Heat is kindled afresh in the Heart (for it was never quite out) but inasmuch as the morbid matter being dissolved, or evaporated from the *Cerebellum*, the motion of the Heart, as that of a Clock, when the Weights are hung on, is set on foot again.

Idem.

Medicines especially made use of by eminent Physicians.

1. The Salt of Elder is highly commended for preservation from the Apoplexy, if it be mixt with a third part of the volatile Salt of Amber, and every new and full Moon be given,

from

Martinus Blackwitiu
snar. Sam.
luci. Selt. 3.
p. 5. de
poplexia.
Joh. Theo-
dorus de Bry
introduit. in
vital. Philo-
soph. tract. 2.
de causis &
curatione
morborum, c.
de gutta.

from one scruple to half a drachm in some convenient Liqueur. Also the distilled Spirit of Elder Berries will doe much good, if a Spoonfull of it be taken once a week, at each quarter of the Moon, with a little white bread and Sugar.

2. The Solution or Oil of Pearl is a Secret in the Apoplexy; if one have lost his Speech, drop five or six drops on his tongue, and he will recover his Speech.

3. Decoction of Sarsaparilla is a divine Remedy in preservation from the Apoplexy: for its detensive, cutting and opening, and strengthens the inner parts of the head especially. It may be thus prepared: take of Sarsaparilla cut, two ounces, of Primrose and Lilly Conval Flowers, of each an handfull, Fen- nil Seeds six drachms. Steep them four and twenty hours in two quarts of Water, and boil half away, when it is almost boiled, put in of Agallochum three scruples and an half: Strain it and keep it for use. The dose is five or six ounces in a morning with a drachm and an half of Cinnamon Water; let the Patient sweat, but not so as to weaken him much.

4. Having had singular Experience of these Pills, in preserving from the Apoplexy, I advise the use of them, whereof I give a scruple at night every time the Moon is at change and full, even in Summer. Take of Cubebs, Calamint, Mastich, Nutmeg, Cloves, each a drachm, Amber-grife half a drachm, Musk six grains; with juice of Marjoram, let them be made into Pills.

5. Let him that is subject to the Apoplexy hold a piece of roasted Nutmeg frequently in his Mouth. For this corrects the cold temperament of the Brain.

6. The use of Caraway seeds not onely eaten, but smelled to, is highly commended. Also the following Powder is very good for Preservation. Take of the Roots of *Siseli Creticum*, one drachm, of the Seeds of Rocket, Cardamome, White Pepper, each two scruples, mix them and make a Powder. Let him take to the quantity of a Bean, or mix it with syrrip of Betony. It is good to snuff into the Nostrils. Marjoram Water, which hath had beaten, Rocket-seed, and a little Ginger steeped in it.

7. You may preserve your self from the Apoplexy, if once a Month you take of *Hiera Hermetis* three drachms and an half, and thrice a week a drachm of Mithridate, except in Dog-days. The *Hiera* must be taken in the morning fasting, and the Mithridate at Bed time.

8. This Powder is good to preserve from the Apoplexy. Take of White Amber prepared three drachms, of Peony Root, *Species Diarrhodon Abbatis*, each half a drachm; Mix them and make a Powder. The Dose is a drachm every month, next day after the change of the Moon, in a little *Aqua Vitæ*. The use of it must be continued, and so at length the Body will be freed from the Apoplexy, and from several other Symptomes.

9. A Powder made of a like quantity of White Amber, and *Species Diarrhodon Abbatis*, given to a Scruple in Betony, or Black-Cherry water, is deservedly esteemed as a peculiar Remedy in the Apoplexy and Stone.

10. This Balsame bears the bell from all the rest; Take of Oil of Nutmeg by expression one ounce, *Species Diambra* one drachm, of Hare's Pasterns half a drachm, infuse them in a sufficient quantity of Oil of Castor for two days; when you have strained it, add Oil of Cloves, Cinnamon, Lavender, Marjoram, Cummin, Amber, each one Scruple, of Musk and Amber-grife, each half a scruple, mix them, and make a Balsame, shave the head, and apply it.

11. This Ointment of *Villanovanus* is of admirable use; Take of Galbanum half a pound, of Gum Ivy half an ounce, mix them, and distill them by an Alembick, take the Oil and Water and mix them with an ounce of Oil of Brick, and a pound of Turpentine; distill them again, separate the Oil from the Water, and keep the Oil for an Ointment.

12. *Claudius Deodate*, *panthei hygiast. lib. 3. cap. 21. de*

Specifica particul. morb. curatione, p. m. 127. Apoplexia fere gutta; highly commends the Semilunar Stone, found above the eyes of a Carp. And, *Johannes Vincentius Finckius, enchirid. Dogmatico Hermet. cap. 6. de Apoplexia*, tells us, This Stone was a Noble Womans Secret, whereby she cured several of the Apoplexy, of that especially which seized the Patient with the motion and contraction of the Muscles above the Eyes, by giving some of them in *Aqua florum Tiliæ*.

13. A most secret and certain remedy against the Apoplexy. Take of Lion's Dung powdered two pounds, pour Spirit of Wine, till it be covered three fingers breadth, let them stand in a Viol stoped three days. Strain it, and keep it for use. Then take a Crow not quire penfeathered, and a young Turtle, burn them apart in an Oven, powder them, pour on the above-said Spirit of Wine, let them stand in Infusion three days. Then take of the Berries of the Linden tree an ounce and an half, of Peony seeds powdered one ounce and half. Let them be steeped in the foresaid Spirit, then add as much of the best Wine, and six ounces of Sugar-Candy, boil them in a Pot till the Sugar be melted. Put it up. Let the Patient take a spoonfull of it in Wine often in a day for a whole Month. In the Paroxysm give a spoonfull, with *Aqua Tiliæ*, and with the same Water rub the Forehead, Neck, Temples and Nostrils. The Arch-Dutcheffs of Austria had frequent experience of the Virtue of this Medicine.

14. Take Oil of Cinnamon, Cloves and Lavender; if you know how to change them into Volatile Salt, you have got as effectual a Remedy, as can be expected from these Simples in an inveterate Vertigo, 778. Palpitation, Apoplexy, and such cases.

15. The following *Aqua Vitæ*, or Quintessence preserves a Man from, yea cures him of the Apoplexy, if a spoonfull of it be taken every morning. Take of Conserve of Rosemary Flowers, Lavender, each two ounces, of Balm, Sage, each one ounce, of *Species Diamoschi dulcis*, *Diambra*, each two drachms, of the Root of Peony, the Seed of the same, of Cinnamon, each half an ounce, of Saffron a drachm, of Castor, Rocket Seed, each two drachms, of Sugar Candy half an ounce, of Juniper Water distilled four pounds, bruise them and mix them, let them stand infused in the Sun, or some warm place for a Month, distill it in Ashes, let the dry Matter be taken out of the Glass, and pounded, and let the distilled Water be poured on it again, let them stand in a warm Infusion fourteen days, and then distill them in *Balneo Mariæ*.

16. I gave a Noble Apopleck Woman, who could not speak for three days, Spirit of Black Cherries, and she presently recovered her Voice. *Mr. Thomas Kessler tractatu. German. 200 process. chim. process. 33.*

17. Essence of Amber, with Apopleck Water, is a most excellent Remedy for an Apoplexy.

18. Tincture, or Essence of the Amethyst, is both an excellent Preservative and Cure. The Dose is to fifteen drops.

19. Take of Flowers of the Linden-tree, and Lilly of the Valley as much as you please, Bay-berries two ounces, beat them all well together, till they be in a kind of Mass: Then take some juice of Violets mixt with Sugar, pour it on the Mass, mix them well, and strain the juice hard out. Take this, and half as much Salt of Wormwood dissolved into Liqueur. Distill it by a Retort, receive the liquor that comes over, drive it through a Retort again, and then bring it over an Alembick, that there may be no Phlegm, and you will have a most excellent Spirit, of which you may give half a spoonfull, with a little Cinnamon, or Linden-Flower Water, to an Apopleck person. It gives present help, and preserves a Man his whole Life from the Apoplexy.

20. For the Apoplexy. Take of the best *Aqua Vitæ* one Pint, of Juniper Berries two handfulls, bruise 83.

Franciscus Hildtheim, *Spicilegio*, 6. p. 536.

Jo. Bap. Van, *Helm. Traß. de Febribus*, c. 15. p. m.

Franc. Joel. *Oper. Med. Tom. 1. l. 1. Sect. 3. p. m. 91. Apoplexia curatione*.

Conrad. Kunrad. *Med. distill. part. 1. p. m. 202. & 248.*

Idem. p. 2. p. m. 137. ad Apoplex.

Phil. Muller. *mirac. chim. lib. 5. p. m.*

bruise them, and Infuse them in the *Aqua Vite* for three days; strain it out, and put into it of Sage, Pennyrial, Cresses, Saffron, each one drachm; give a little to the Patient, and he will presently recover his Speech.

20. *Felix Platerus tract. de function. les. cap. 2.* faith, That Chymists give the Extract of Sage in Apoplexies as a great Secret.

Job. Popp.
Tract. de Fe-
bribus malig-
nis, c. 3. de
Apoplex.

21. A sure secret for the Apoplexy, and loss of Speech. Take of Oil of White Amber seven grains, of Ambergrise and Musk each eight grains, of the Water of Lavender, Betony, each half an ounce, of the Water of Marjoram one ounce, mix them and make a Liquor, which, when taken, the Speech will be restored.

22. The following Water is of admirable Virtue, in comforting the Brain and Nerves. It powerfully helps the Memory, sharpens the Wit, strengthens the Judgment. Whether it be taken inwardly, or the Part affected be chafed with it, it doeth much good. Every Dose may be exalted with some grains of Magistery of Pearl, or Specifick of Antimony. Take of the Leaves of Sage, with the Tops and Flowers of Marjoram, Lily Conval, Balm, Hyssop, Lavender, each two handfulls, of Rosemary, Vervain, each half an handfull, of the Root of Leopards-bane one ounce, of Nutmeg, Galangale, Cinnamon, each one ounce, of Bayberries, Juniperberries, each three ounces, of Herb Paris one ounce, of Caraway-Seeds, Cubebs, Cardamome, each half an ounce, of Whitewine as much as is sufficient. Let them be well bruised and Infused for some days, or let them stand fourteen days in Horsedung. Then distill it in *Balneo Marie*.

Guernerus
Rolfinkius,
Ord. & Meth.
Med. special.
consultatorie
l. 2. Conf.
35. & 37.

Dan. Sen-
nert. l. 1.
par. 2. c. 33.
p. m. 665. de
Apoplexia.

23. *Confectio Anacardina*, as it is proper in all cold diseases of the Brain, so in this especially, given either alone (if the Patient come to himself, and can take solid Medicines) or dissolved in *Aqua Vite*. Also distilled Oil of Nutmegs, if dropt into the Nostrils and Ears, and the Palate be rubbed with it, is highly commended.

24. A Mineral Antapoplectical Water. Take of Creme of Tartar one pound, of the Mineral of Antimony a pound and an half. Let the Acid Spirit be distilled, by a Retort, with a moderate fire, which let be rectified. Take of this six ounces, add thereto of Spirit of Venus made of Verdigrisee, three ounces, of the burning spirit of Saturn, distilled from his Sugar, an ounce and half, of the volatile sulphureous Vitriol, rectified by the acid spirit, four ounces. Mix them for use. It is an excellent tart Water, much to be desired in all Apoplectick, Epileptick, and Soporose cases. It may safely be given to Children in Fits, from one drachm to two in some gratefull Vehicle.

Appetentia nimia, depravata.

Or,

The Appetite too great and depraved.

The Contents.

We must not use too much fat things in allaying it. I.

Narcoticks must be used cautiously. II.

A depraved Appetite cured by Sweat. III.

By Volatile Salts. IV.

By running of the Hemorrhoids. V.

Medicines.

I. **F**at and clammy things stay too great hunger: yet they are more proper in the beginning, when we would provoke Vomit: but when the Vomit becomes violent, they must be omitted. We must also have a care lest we use them over-much,

and the Patient be brought into a contrary condition; therefore, when the Patient begins to mend, Sennettus. Fat things, and which hinder concoction, must be omitted.

II. But Narcoticks are to be used with caution, and strong ones avoided, as the Infusion of Mad Nightshade made in Wine, which immediately destroys all appetite of Food in the most voracious person. Yet strong Wine and Brandy may be used, which, according to *Platerus*, take away hunger, not so much by heating, as stupifying: As Treacle and Mithridate by the same narcotick quality, he thinks, do take away the dog-like Appetite.

Item.

III. It is good in the depraved Appetite, sometimes to cause a gentle Sweat. But we must have a care that the Patient be not stifled with Clothes; for it were better not to sweat at all, than too violently; seeing that Sudorifics mend and correct the bad humours, though they expell them not. And I still prefer liquid and spirituous things before gross ones, though Antimonial, how dry soever, are excellent in this case, to wit, *Antimonium Diaphoreticum*, *Bezoarticum minerale*, &c.

Fr. Solvius
de le Boë,
Tract. l. 1. c. 2.

IV. Seeing a depraved Appetite differs, according to the diversity of the thing craved, I will here propound its Cure onely in general, which consists in cleansing the Blood, and other humours, by amendment whereof, the *Pica* ceases of it self. I have by experience found, that Volatile Salts doe more good than all other Medicines I have yet tried, because they provoke the *Menses* gently and kindly. The suppression whereof is often the cause of the *Pica*.

Idem. Præ-
lib. 1. c. 2.

V. A Man troubled with the Itch, had also the longing Disease for three Months. He had the Hemorrhoids, and within two days the Disease left him: For the matter residing in the Veins affected the Nerves of the Stomach, which once removed, the party was eased of that trouble. Whence it is clear, that in this Disease the matter doth not always stick in the Nerves.

Rhodius,
Centur. 2.
Obs. 57.

Medicines especially made use of by eminent Physicians for Excess of Appetite.

1. Take of *Hiera simplex Galeni* one Scruple, of Rhu- Petr. Forest, barb well powdered a Scruple and half, with Syrup of lib. 18. Obs. 8. Roses solutive, make it into Pills, N^o xv. I have cured several of this Disease, with these Pills onely taken for some time.

2. The Philosophick Spirit of Vitriol divers times Hartmannus given in Pomegranate-Wine, Syrup of Lemons, or Tract. Chron. a. r. p. 100. Tincture of Roses, cures most perfectly.

3. If in a Boulimy one be troubled with Fainting, it is good presently to give him Bread sopped in Wine. Senn. de Boulim.

4. Antiquity found not a more present Remedy Weikardus for this eating Evil, than Bread and the smell thereof. Theaur. Pharm. l. 1. c. 11.

For the Appetite depraved.

5. I know, that to give a Drachm and half of the Hor. Aug. 3. Powder of the Seed of Ammi, four days one after another, doth admirably help a depraved Appetite, for the Women are either cured, or much better by it. Ejist. Conf. p. 425.

6. These two things have great Efficacy in the Jul. Cels. Claud. in longing Disease. (1.) Take of Walnut Buds four Empirica. Ounces, Aloe Socotrina one Ounce, Juice of Agrimonia half an Ounce, Frankincense one Drachm, Ration. p. 238. Scoinanthe two Drachms. Mash them together, boil them in water till the water be almost boiled away. Then strain it, and to what is strained out, put as much Honey, give one Drachm of this every other day. (2.) Take of Mustard-Seed half a Scruple, of Pigeons Bones burnt to ashes one Drachm and a half, Seed of Purslane one Drachm, Cinnamon two Scruples,

Scruples, Juice of Quinces two Ounces, White Sugar three Ounces. Mix them in a double Vessel over the fire.

David Her. lic. de cur. gravid. c. 16. 7. This is very good. Take in the Month of May the first white Buds of the Vine, bruise them and distill them by an Alembick. Let a Woman with Child drink a little of this for three or four days; and it will neither hurt the Child, nor give it any Mark, though she should not get what she longed for.

Jacob. Hol. Ier. Inf. Chir. p. 49. 8. A Decoction of the greater Chamæmil, that is very like Southernwood, will be of great use in this case: for it surpasses all other sorts of Remedies.

Mercurial, de morb. Mul. p. 33. 9. If Women labour under a depraved Appetite, Egineta commends the use of old and odoriferous Wine, the Water of Shepherd's Rod, especially drunk after Meals: also Dill infused in Wine.

Schroderus: 10. Sowre Pomegranates are good for the Pica in Women with Child. The Leaves of the Vine are also good.

Trotula de Regimin. Pregnant. p. 101. 11. If a Woman with Child long, give her Beans with Sugar.

Remedies must be used constantly. XXXIX.

A Milk Diet good, if it can be continued in. XL.

Medicines.

The sum of William ten Rhyne's M.D. Treatise of the Gout.

I. Hippocrates l. de Affect. Sect. 3. lays down the peculiar signs of the running Gout. 1. Pains of the Joints, with remarkable heat, not in them only, but the whole Body over, insomuch, that men seem plainly to be in a Fever. 2. The nature of the Pains, which at the very first invasion are presently acute, although sometimes they are more moderate. 3. The running of the Pains from one Joint to another. The essence of the running Gout consists in these Three things, which distinguish it from the Gout: for in this the heat is not so evidently perceived at the first, as in the running Gout, nor till the corrupt Humour in the Veins be transmitted to the out-parts. And the reason of this difference arises hence; because in the Gout the Disease is in the little Veins, and the inner parts; in the running Gout it lies outwardly, and nearer the skin. 2. In the Gout, the Pains at least in the beginning are not so sharp, and that by reason of the Matter, which, in the running Gout is thinner and sharper; which diversity of Matter indeed may be one cause, why the pain in the running Gout is accompanied with greater heat, than in the Gout it self. And therefore the running Gout is reckoned among acute Diseases: but the Gout among the Chronical, l. 1. de morbis, where there is no mention made of the Running Gout, it being an acute, not a chronical Disease. And then the running of the Pain from one Joint to another distinguishes them: For although the Gout pains pass from one Joint to another, they doe it gradually, and not so suddenly as in the Running Gout, in which, when the pain is at the height, it presently ceases, and takes another joint. Hippocrates saith, that Choler and Phlegm when they are moved and settle upon the joints, are causes of the running Gout. Where observe, that these Humours come not from any particular part of the Body, but from the whole: And in this lies the difference, the morbidick matter of the Gout comes not from the whole, but is cast off by some Principal Part to the Joints. And this is the chief reason why the Gout is a far more grievous Disease than the running Gout, and harder to Cure; and why the running Gout is sometime perfectly cured, and never comes again, which the Gout generally does. For whatever Hipp. l. de Diseases pass from a stronger part to a weaker are difficultly cur'd. Since therefore the Gout is of this nature, no wonder if its Cure be difficult; and the rather, because it is not easie to find what is the original of it, the Brain, or Liver, or what other noble Part; which being unknown, it is utterly impossible to cure the Gout, seeing the Part which sends the Humour should first be cured. Therefore, to the breeding of the Gout there concurs, 1. The fault of some Principal Part, which breeds, gathers and disposes of the morbidick matter. 2. The disposition of the joints to receive the Flux, i. e. a certain weakness, which when there is none, there is no Gout; but Diseases much of the same nature, and returning at certain times, as the Colick, Epilepsie, Asthma, Vertigo, Head-ach, especially the Stone in the Kidneys. Another difference of these two diseases, in respect of their material cause, is, that onely Choler and Phlegm concur to the breeding of the running Gout; but Hippocrates saith of the Gout, And indeed this is a disease of the Blood in the small veins, corrupted by Phlegm and Choler. Whence we may gather, that Bile and Choler are carried from some part principally affected, by the Veins to the Joints; where, if they find the Blood in the little Veins disposed to corruption, they corrupt it, and cause pain: If not, they use not to cause pain, because the Vessels do contain them; and unless there be distension, or the Humours be extravasated,

Arthritis, Podagra.

or,

The running Gout, and Gout.

The Contents.

The running Gout and Gout differ in their Causes and Cure. I.

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After what manner Alteratives given in the Paroxysm doe work. XIX.

Whether Sudorificks be proper. XX.

Whether Milk be good against the Gout. XXI.

What Preparatives should be used for prevention. XXII.

Whether Narcoticks taken inwardly doe good. XXIII.

In what the Virtue of Antipodagricks consists. XXIV.

Whether Medicines outwardly applied doe good. XXV.

The benefit by Application of Narcoticks. XXVI.

Whether the use of cooling things be safe. XXVII.

Whether Strengtheners should be applied. XXVIII.

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Whether it be possible to dissolve the Knots in the Gout. XXX.

A thin Diet is proper. XXXI.

Diet doeth more good than Medicines. XXXII.

Exercise, when convenient. XXXIII.

Bleeding will doe little good in old Men. XXXIV.

Purging will doe none. XXXV.

Used by Empiricks. XXXVI.

Sweating must not be procured by Art. XXXVII.

Things that help concoction are proper. XXXVIII.

travaſated, there can be no ſolution of Continuity, which is the proximate cauſe of pain. *Hippocrates* treating of the Cure of them both, ſaith, *And the ſame things are good for this, which are good for the running Gout.* And the reaſon of their Convenience is, becauſe all of them have reſpect to the material Cauſe, i. e. Choler and Phlegm, which fall upon the Joints. But treating of the Gout he ſubjoyns; *But if the Pain abide in the fingers, burn the Veins a little above the Knuckles, and you muſt burn them with raw flax.* He propounds not this Remedy in the running Gout, both becauſe the

P. Martianus
comm. in. cit.
loc. p. 170.

remainder of its pains are not of any continuance, and becauſe it lies not ſo deep as the Gout; as alſo becauſe the continuance of the Pain argues great weakneſs of the Joint, which cannot be better helped than by burning, and it may alter the bad diſpoſition of the part, whereby the blood therein contained is diſpoſed to corruption, in which the Eſſence of the Gout ſeems to conſiſt.

Sennertus,
Epist. 1. cent.
1.

II. We muſt rather take care of the Part that ſends the Humour, leſt it breed more, than think of outward Applications. All the ſtreſs of Precaution lies in this, in hindring the breeding of Serum, and the Ebullition of Humours. *Crato in Epist. 52.* hath theſe words; *I think the whole of Precaution conſiſts in a right courſe of Diet and Abſtinence; alſo in waſhing the Head and Sweating.*

III. That efficacious Remedies are required to cure the Gout, theſe following examples of perſons cured do ſhew. A Turk at *Conſtantinople* (as an ocular and credible witneſs, *Mr. Arlaud* a Watchmaker of *Geneva* told me) who had a confirmed Gout, received, according to the Cuſtome of that People, five and twenty blows with a Cane upon the Soles of his Feet, as a Punishment for ſome Fault; he was deprived of the uſe of his Feet for ſome days, but he lived afterwards free from the Gout. Alteration of Diet is of great efficacy in this caſe. *Mr. Franchet* of *Pontarlier* in *Burgundy*, a Man well known to moſt, and to me formerly, who was baniſhed his Countrey by an inrode of the *Swedes*, *An. 1636.* into *Burgundy*; having loſt all, was forced to get his living by carrying a Panier at his back to Markets and Fairs; and by this courſe of life he lived afterwards free from the Gout.

IV. The Patient was an Inn-keeper, the Phyſician was a certain Noble Knight, who bargained with his Hoſt to Cure him of the Gout for 300 Florens, and having received a Bill under his hand, he undertook the Cure. The Patient was commanded to ſet his Feet upon a Block of Wood. The Knight had his Servants, who were ſtout Fellows, by, to hold him down, as he ſate; The Knight himſelf with a Hammer, and ſix Nails, nailed his Feet to the Block; he left his Patient crying out moſt miſerably, and took Horſe. In the mean time he made Inquiry, whether the Gout came again, and after three years, when he underſtood it was not come, he returned to the Inn, and joking with his Landlord, Asked him, If he was Cured of the Gout? then he produced the Bill under his Hand, and demanded his Fee: His Landlord, though cruelly handled, agreed to it. The Knight indeed tarried ſo long with him, till he and his Servants had ſpent the 300 Florens.

Doringius,
Cent. 2. Epist. 46.

V. *Lewis Noel* a Surgeon of *Geneva*, Sworn Searcher of the Dead, who died almoſt Ninety years old, *Anno 1678.* had been long afflicted with the Gout. When he was laid up of a Fit, a Woman that was a Natural, called *le Maistre*, ſeals into the Houſe, and catching him by his Feet, ſhe hit one againſt the other violently, and would not leave off, till ſome came to his aſſiſtance, and turn'd his Tormentor out of doors. From that time he lived free from the Gout Twenty years and upwards, and made uſe of no Remedy.

VI. Blood-letting, for prevention ſake, muſt never be omitted in Plethorick Bodies, nor in thoſe that fare well, and drink high. Spring and Fall

breathe a Vein in the Arm; in Melancholick perſons bleed the Hæmorrhoids, in Women provoke the Menſes if they be ſtopt. *Galen* confidently affirms, it is a preſent Remedy in ſharp Pains, violent Deſfluxions, and high Inflammations. And if theſe three meet in the beginning of the Gout, Who will deny it in ſo urgent neceſſity? Since the Excellency of this Remedy is ſuch; Can any other more certain, or of leſs dubious event be tried? Should not this, when pains are urgent, be preferred before Purg- ing?

*Th. de May-
enne de
Aribr. p. 94.*

VII. In a freſh Gout, or in one not very inveterate, in a hot conſtitution eſpecially, to let Blood in the beginning of the Diſeaſe, often gives relief. But in an habitual Diſeaſe, a cold Conſtitution, and old Age, it uſually does more hurt than good; inſomuch as it depreſſes the Vigour of the Blood and Spirits that are not raiſed too high, without any diminution of the Morbiſick Matter.

*Willis, cap.
de Aribr.*

VIII. A Magiſtrate of *Copenhagen*, *An. 1665.* was taken with a Second Fit of the Gout; his pain lay moſt in the Great Toe of his right Foot, and the Veins of that Toe ſtrutting out very much; I ordered him to be bled where his Pain lay moſt, the Blood ſprung out as violently, as if it had been out of the Median Vein. Afterwards I applied the following Cataplaſm, and he was eaſed of his pain to the admiration of all men, ſo that within three days he was able to go abroad without any inconvenience. Take of freſh Allgood without the Flowers 4 hand-fuls, dry Flowers of Elder, Chamæmil, each 2 hand-fuls. Boil them to maſh in a ſufficient quantity of Elder-Water; add of Gum *Caranna* half an ounce, Camphire half a drachm. Mix them, make a Cata- plaſm.

*S. Paul Quæ-
drip. Boian.
Clas. 3.
Bonus Hæ-
ricus.*

IX. A Vomit is an excellent Preſervative againſt the Gout, which may be provoked by the help of Emeticks, where there is abundance of Humours; where the Joints are lax, and the Diſeaſe draws nigh, and when the Patient lives at large, and hearkens not to the Advice of Phyſicians, but indulges himſelf to the loſs of his health. But there is another ſort of Vomit, very uſeful and leſs troubleſome. If you would underſtand the Reaſon of it, you muſt know, the Original of the Gout muſt not be derived from the Liver or Brain, but from the Stomach, the firſt ſource of the material cauſe, which is afterward diffuſed through the whole venous kind. According to the advice of the *Arabians*, it is convenient to be drunk once a month, which is not unbecoming, ſo that a Man turns not Swine, but retains his Reaſon. This Advice ſuits well with thoſe Swill-guts, that ſwallow all things without ſcruple. Let ſuch ſtuff their Guts once or twice a Month more than uſual, with any ſort of Food, but eſpecially Fat things, and then drink what Liqueur they pleaſe in greater quantity than ordinary. Let them thus charged ſtand quiet for an hour, then walk gently for half an hour, and then let them put their fingers in their Throats, to make themſelves vomit, that, together with what they have gorged themſelves, they may throw up that Ropy ſtuff which did ſtick to the ſides of the Stomach; but is now waſhed off with drink, and mixt with the food.

*Th. de May-
enne, Traicté de
Aribride,
p. 16 & 26.*

X. A Purge ſhould be given at the firſt, and in the very beginning of the Fit: for ſo the Humour that is flowing, and about to flow, will be diverted from the paſſages of the Joints to the Guts. And in this Purgation two very remarkable things ſhould be obſerved; firſt, not to Purge with a gentle lenient Medicine, that may rather ſtir than evacuate the Humours, and ſo throw them upon the Joints; upon which the Pain and Swelling uſe to increaſe; but with ſome ſmart Purge, that may evacuate the Humour, and avert it from the Joints. Secondly, to wrap ſome Deſenſative above the Knees and Elbows, that the flowing Humour, if any be on Motion, by taking of Phyſick may be intercepted, make an Ointment of Bole, Pomegranate Rind and Flowers, Root of

E Biſſort,

Riverius, c.
3. de Ar-
thritide.

Bisfort, Tormentil, Roses, with Whites of Eggs and Vinegar, which you may apply, and bind on with Swathing Bands and Rollers.

XI. As to Purging in the beginning of this Disease, it is a thing much controverted: while some Physicians do religiously abstain from all Purging before the Declension or end of the Fit; Others, on the contrary, give a strong Purge in the beginning of the Disease, and frequently with good success. The Reason of this Difference seems principally to consist in this, namely, that some Gouty persons have as yet a firm constitution and tone of Humours, and of the Vessels that contain them, and have Joints not yet weakened. Wherefore, as soon as the blood or nervous juice are stirred by Physick, their Superfluities and Recrements are not presently precipitated to the diseased Place; but by yielding to the irritation and motion of the Physick, they are discharged into the Guts by the mouths of the Arteries, and the mean while the empty Vessels do draw and suck back some part of the morbid matter. But otherwise, in tender and weak Constitutions, upon the least commotion of Physick, the Excrements of both these Humours fall upon the Gouty part. Therefore they, for whom a Purge is convenient, must be Purged with a strong and good working Medicine.

Willis, cap.
de Arthritide.

XII. Violent Purgers, although they seem to do good, yet they strangely influence the Body, while they waste the Radical Moisture and Natural Heat, and much weaken the members of Concoction, so that within a little time there is as much Excrementitious Humour bred, as was purged out; Wherefore men must have a care of frequent using such Medicines and unlearned Physicians.

Crato.

XIII. *Bayrus* an Italian Physician extolls his *Caryocostinum* to the Skies, the Simples whereof, since they are very hot, and that its operation is pretty violent, I scarce think it proper for dry bodies, but only for those that are very moist and cold. And although he affirm, that when he was extremely afflicted with the Gout, and the pain was very violent, he hath taken this, and always recovered his Feet, so as to be able to walk to the Close-stool without leading; I do verily believe him, as being a learned Physician, and a well-experienced old Man: Yet it is clear, that Gouty persons should not be purged with their Pains upon them, or if they be, it must be done to purpose; otherwise, you certainly exasperate the Disease. This danger will be prevented, if the same day you take your Purge, you take at night a dose of *Laudanum*: by which means the fury of the Humours will be laid, the Spirits fixt, and when the Cause is diminished, the Ail will abate, and Nature will be restored to her former Liberty.

Th. de May-
erne, in
Tract. de
Arthritide, p.
36 & 49.

XIV. But it is to be observed, that I never use any Purge, wherein there are *Hermodyctyls*, when the Patient should be preserved from the Gout. For there is no need to fetch the Humours out of those parts into which nothing is fallen (except it be an old and knotty Gout, which, by frequent fits hath a return of its pains) and therefore let us be content with things that cleanse the Veins and Head, if it be in fault, after gentle Purging.

Spigelius de
Arthritide,
p. m. 80.

Heurnius,
meth. med. l.
2. c. 23.

XV. In the Gout we must not lightly give *Cassia*; for part of it turns into nourishment, and so renders the parts lax and liable to defluxions.

XVI. Diureticks are good in the Scorbutick running Gout: for nothing more plentifully expels by Urine the Serous Humours, contaminated with a Scorbutick Ferment, which stirs up the *Archeus* to that Affection: especially when these Specificks are Antiscorbutick, which their effect doth clearly shew; for after the use of them, the Urine which before was clear, is made thick.

Wrid. Hofm.
m. m. l. 1. c.
12.

XVII. Whether Salivation (which is an universal Evacuation) be proper in the beginning of a Fit of the Gout? I Answer, I have never made trial of

the thing, nor have I any reason, which might persuade me to use it, but many not to use it. For Salvation cannot be raised presently, but after some days, which here would be to no purpose. And Salvation proceeds slowly, here is need of speedy Evacuation; And if one endeavour to promote overmuch, you endanger your Patients life. Yet I do not deny but it would be good sometime for Gouty persons, that are clogged with much viscid Phlegm: but then it must not be in the fit, but when they are free of it, and while they are strong, so that they neglect not other things, but have respect to other peccant Humours.

Sylvius de
le Boë,
Tract. 8. Sect.
171. & se-
quel.

XVIII. Dr. Willis, cap. de Arthritide, relates a Case of a Gentleman, who, upon his being cured of the Stone in the Kidneys, was seized with the Gout. To cure which, he was advised to drink his own Urine. In a Month or two his Gout left him: but the Stone in his Kidneys returned again, and in a short time he died of a total Suppression of Urine. When he was opened, they found his right Kidney quite wasted, and in his left, between the Cavity and the Passage, a great heap of Gravel and small Stones. The Dr. imputes his last misfortune to his drinking his own Water.

XIX. Powders of Bones, Stones and Shells, as also of sharp Vegetables, which are called the *Alexiteria* of this Disease, are good in a fit of the Gout: for they conquer the Morbid Particles, and by fermenting with them, as it were mortifie, and then they cast them out so conquered by Sweat and U-

Willis.

XX. Sweats after Vomiting and Purging are commended by some in the method of Cure. Indeed, when the Heat is cooled, and most part of the symptoms gone, it were very proper to draw off the reliques of the matter in the Habit of the Body, by Sweat, or insensibly, that the Cure may be accomplished, the Swelling dispersed, the part allwaged, and made more nimble and fit for motion. But here you must take special care: for there is great hazard in Sweats given unseasonably, lest the Parts grow more inflamed, the Salt residing in them be made more fixt, and its passage thence more difficult, or its concretion into insuperable knots more easie. If therefore the Humour causing the Fit be thin enough and moveable, so as it may be drawn off at one essay, and leave no dregs or tartarous matter behind, but that most part of it pass by sweat, you may give sudorifics; but they must be very gentle, of the Decoction of Groundpine or Burdock, and you must use such a Regiment as the Remedy may prove of use, which otherwise will be very hazardous.

Th. de May-
erne, Tract.
de Arthritide,
de. MS.

XXI. A Milk Diet challenges not the lowest place among Alteratives, namely, that the Patient use no other food for three or four Months. Let him drink new milk Morning and Evening, about Noon, and at other times he may eat it boyl'd with White-bread, Barly, or Oat-meal. I have known some receive remarkable benefit from this sort of Diet; but others, who upon the use of Milk have grown worse, and their Gout not at all cured; but have contracted great Obstructions of their Bowels, and a Cacochymy. Therefore this Course should not be entered into without the Advice of a prudent Physician and diligent observation whether it agree or no.

Willis, cap.
de Arthritide.

XXII. Preparatives should respect the Humours wholly, and not the Joints (the preservation whereof must be endeavoured, seeing they contain no matter at present) otherwise the preparatives would rather carry matter to them.

Forstis, Conf.
66. Cent. 4.

XXIII. When the Defluxion is violent, and the Pains intense, nothing is more gratefull and proper to cause sleep (which stops all Evacuation, except Sweat) nor is there anything comparable to *Laudanum*, 2, 3 or four grains of which may be given at the hour of sleep, for several nights successively. In time

The. de
Mayerne,
Traité de Ar-
thritide, p.
41.

time of Pest the Humours concoct, and Nature recovers strength, and makes head against the Adversary. There are other Narcoticks succedaneous to Laudanum, but it has the preheminance above all the rest.

Willis, c. de
Arthritide.

XXIV. Alterative Medicines, by the Ancients called Gout Antidotes, are of excellent use, and taken for a long time, together with an exact observation of the fix nonnatural things, often give great Relief. Those Medicines are reckoned the chief of this nature, which are endued with a Volatile Salt, or Balsamick Sulphur, inasmuch as these do exalt the fix Salt, and they reduce the Sowre: Moreover, bitter things, such as the leaves of Germanander, Groundpine, Centaury, the roots of Gentian, Arisæolocchia, &c. (for these things are approved by experience in this Disease) seem to be proper for this reason; because they help concoction, and Chylification, and restrain the Salino-fix feculencies, that they be not carried to the Blood.

XXV. Although there be danger in all sorts of outward Applications; in Repellers, for fear of a recourse of the Humours to the noble parts; of increase of pain, when they are return'd inwards, and of the concretion of them in the Joints; in Diaphoreticks, lest when the thinner parts are dispersed, the rest of the Humour settle deeper in the part; of Anodynes, for fear of Relaxation; and of Narcoticks, for fear of weakening the Parts: Yet Anodynes seem most necessary; because Pain, that most grievous Symptom, weakens, draws the Humours to the Parts affected, causeth want of sleep, restlessness, a hot intemperature in the Bowels, and a Fever in the Blood; it dejects the Appetite, spoils Concoction, and breeds bad Blood. Hence arises an increase of bad Humours, and of the Morbifick Cause, hence vapours arise to the Head, and obstructions in the Bowels, which are succeeded by various Symptomes, especially by a decay of the innate Heat. Now by Anodynes the parts are mollified, and the Humour which lay deep in the Joints, is drawn outwards, whereupon the pains of the Gout, which before were most violent, abate, as the part swells. But the greatest caution imaginable, and the advice of a skilfull Physician is requisite, who must consider the time of the Disease, and its Matter: for what things are good in the beginning of the pain and defluxion, are not good in the state, nor are the same things proper in the declension, or conclusion of the Gout; and so, either through unseasonable use of Remedies, or variety of Matter, frequently that which hath done one Man good, does another Man hurt.

XXVI. Most Physicians condemn Narcoticks and Stupefiers; because safer means are not wanting, whereby the violence of the pain may be asswaged: And in their opinion it were better not to stop mens roaring, rather than to weaken them with Medicines of that nature. A pretty plausible pretence! As if the patient and his parts were so weakened thereby. Narcoticks indeed taken inwardly, if they be not dextrously administred, are not void of hurt; for, given unseasonably, they cause a Congelation, if I may so say, and immobility of the spirits, not by cooling, but by fixing, which is the product of a luxuriant Sulphur in remedies of that nature, and upon the immobility of the Animal spirits their influx is stoppt, and Death with suffocation doth follow. But if sharp pain do rage, you need fear no such thing from the outward Application of such Remedies; since it is certain, that one dayes pain weakens and hurts the Nerves more, than six days such outward Application. But suppose a little deadness should remain, there are a thousand Remedies to take that off; as Baths, Fomentations, Plasters, Stoves, and other things, which quickly doe it. Besides a Narcotick mixt with its Antidote becomes harmless. All Authours almost in violent Pains of the Gout, make use of Henbane: Some go as high

as Opium: If the Spleen be very hard, we apply Hemlock without any danger; nay, it is applied to the eyes, so near the Brain, with great success. And I, being backt with good success, make no scruple to apply both the said plants, with Cassia, Camphire, Saffron, Sperma Ceti, and Man's Grease, which is a most excellent Anodyne in this Disease.

XXVII. Hippocrates bids men, before Universals, allay the pain by outward Application, which our Age so much dreads before general Evacuation: but this is no new thing with Hippocrates, who knew how dangerous a purge was, if given in the extremity of pain, as appears from 4. acutor. vers. 396. He orders the pain in the running Gout and Gout to be mitigated with things actually cold. 1. Because they quench the actual heat of the running Gout, and assuage the Acrimony and Fluxibility of the Humour in both Diseases, and they dull its activity and violence in acting, from which all sense of pain arises. 2. Coolers, by strengthening the innate heat of the part affected, do better qualifie it for Coction and Expulsion of the Humour. 3. They hinder the generation of a Callus in the Joints, which hot things often promote, by evaporating the thin part of the Humour, and baking the thick. I know the Vulgar believe the contrary, who are afraid to use actual coolers in the Gout, or any pain of the Limbs: But they are deceived; for although Cold do harden as well as heat, yet the hardness caused by Cold does not in our case harden into tophous knots, because it still retains its proper moisture, although congealed by Cold, which at length, by application of heat, dissolves, and recovers its former softness. But whatever is hardened by heat, it is deprived of its proper moisture, the heat consuming and exhaling it, so that a hardness is introduced, which is not easily removed, such as the hardness of those Tophi, which the Joints of Gouty persons contract.

XXVIII. When the Fit is over, it is usual to apply Diapalma Plaster, which indeed is an innocent thing, but of small comfort. There are many better things extant, such as Emplastrum de Hermodactylis, de Minio magistrale, they call it Emplastrum Sandicis: Gum Cinnamon, and Tacamahaca dissolved in Spirit of Wine, are of singular efficacy, Emplastrum Betonicae, &c. For they that have undergone an Assault of the Gout, have occasion for the use of some remedy, that by its drying virtue may strengthen the nervous parts, whose tone and native temperament may be preserved by such things. Agineta, a learned Physician, rubs the Joints of Gouty persons with an Ointment of Oil and Salt. It is good when the pains are over, but best of all to prevent them. There is an Oil made of Winter-Gillflowers, which is much bettered by addition of the Flowers of Mullein. By the use of it, a Physician belonging to the Duke of Balloin got such strength in his Joints, that after he had been 30 years troubled with the Gout, and he had lived as many more, 10 years before his death (he lived above an hundred) he walked as stoutly, as if he had never had a Fit of it.

XXIX. Such Discutients are requisite, as may not only open the Pores, that the Serum may evaporate, and the Blood be made to circulate, as in a Phlegmon and Oedema: But such, whose Saline parts designed to oppose those Saline ones of the Arthritick Matter, may either, by mixing with them, bring them out, or by precipitating them, keep them from those painful Effervescencies. Wherefore, in this Disease, when Fomentations, or Cataplasms of Chamæmil, Mallows, Linseed and Fænugreek, doe little or no good, nay often a great deal of hurt, by relaxing the Nervous parts; some Dissolutions, or stillatitious Liquors of Sal Ammoniack, Sea Salt, Nitre, Vitriol, Quick-Lime, and the like, which, in other Swellings, or Pains, always doe hurt, are usually of great benefit. Several such Liquors to be applied to the part grieved in a Fit of the Gout,

De Mayerne
de Arthritide,
p. 41.

Prosp. Maffi-
tanius, c. omnia
in vers. 27.
Sect. 2. lib.
de Affectionibus.

De Mayerne
Traité de
Arthritide, p. 44.

Willis, cap.
de Arthriti-
de.

and which have been tried by experience, are pre-
scribed by *Quercetani, Hartman, Crollius* and others.

XXX. He does but expose himself, that engages
to dissolve the Knots in the Gout; for if they are
grown hard, it is onely labour lost, to try any such
thing. But while the Matter is but in Gelly, I
should not think it utterly impossible, if we could
get a Remedy that would reach it, and that bore
any proportion to it; Such is *Sal Ammoniack* both
natural and artificial, yea, that which is made of
Smoak and Urine. But volatile Salt of Urine depu-
rated by many Sublimations, exceeds in virtue all
other remedies. The Pores of the Part being
sufficiently opened by a Bath or Stove, or over the
steam of a *Lixivium* made of the yellow dross of *Re-
gulus* of Antimony (whose Sulphur draws most pow-
erfully, nor is it less potent in its dissolving virtue.)
Take Salt of Urine, mix it with the best Spirit of
Wine, of this mixture make a Fomentation. Oil of
Arisenick digests and draws outward, nor is there for
this purpose a Remedy to be compared with it, if a
little of it be mixt with May Butter, or some other
Fat, anoint the Part gently. Sometime such swell-
ings are dispersed by the sweating out of a cer-
tain viscid matter, like Fat; and Blisters often arise
weeping watry drops, not unlike Eggs when they
are roasting. The main point in the use of this Re-
medy, is not to make too much haste; for often the
effect shows not it self, till the twelfth, or fifteenth
day, or longer.

Th. de May-
enne, Traité
de Arthriti-
de, p. 47.

XXXI. There are great Physicians, who singularly
commend Cabbage, and advise those that are sick of the
Gout, while their Pain is upon them, onely to eat Cab-
bage. This indeed is certain, that Food, the less nour-
ishment it affords, the wholesomer it is: Therefore
they that are troubled with the Gout, must abstain
from Hens and Capons, which breed much nourish-
ment and blood.

Crato.

XXXII. A Man should, without doubt, abstain
from Wine, and all things that supply such a Tartar
and sharp humours; For when I was once troubled
with the Gout, and had read several Authours upon
that subject, I observed they all agreed in this, that all
hope depends more on a good Diet, than on Medicines.

Sennertus,
Epist. I.
Cent. 4.

XXXIII. Let the Gouty person take a turn at
least in his Chamber, although stirring want not
pain: for heat of the Part, and attenuation and
resolution of the matter follows Motion. So exer-
cise will be good for prevention, but it must be mo-
derate. For, *Paul, l. 3. c. 75.* saith, that abating of
ones Diet, and as much exercise as is sufficient, pre-
vents the Gout.

Fortis. Con-
sult. 73. Cent.
4.

XXXIV. First of all Blood-letting, what great
things soever it promise, either in evacuating the
humours, that stand ready and upon the point to
descend; or those that are already got into the
Joints; yet it is manifestly repugnant to that Indi-
cation, that the antecedent cause, which is Indige-
stion, arising from depravation or defect of spirits
(whom taking away of blood farther diminishes
and oppresses) doth challenge. Blood-letting there-
fore may not be used, either to prevent the Fit, that
is feared, or to mitigate it, when come upon a man,
that is, in the elderly sort. For though the blood
that is taken away, be like theirs that are sick of a
Pleurisie, or Rheumatism, for the most part; yet it
is observed, that Blood-letting does harm as re-
markably in this case, as it does good in those other
two. For if blood be taken away in the Intermiss-
ion, though never so long after the Fit, there is
danger, lest a new one should come on by the agi-
tation of the Blood and Humours, that may prove
longer than the former, and be attended with more
enormous symptoms, the strength and vigour of the
blood, by help whereof it might stoutly cast off the
matter of the Disease, being thereby abated: And
this Inconvenience befalls a Man, if he let Blood in
the beginning of a Fit. If a Vein be opened presen-
tly after the Fit, there is great danger, lest nature,

while the blood is yet languid, and has not recover-
ed its strength wasted by the Disease, be so weakened
and sink by this wound unseasonably inflicted, that
way be made for a Dropsie. Nevertheless, if the
Patient be young, and heated with hard drinking,
Blood may be taken away in the beginning of
the Fit: but if he use constant Blood-letting in
the following Fit, the Gout will grow inveterate,
even in a young Man, and will increase its Empire,
or rather its Tyranny farther in a few years, than
otherwise it could have done in a great many.

Sydenham, de
Podagra, p.
33.

XXXV. Then as to Purging, whether upwards or
downwards, we must take notice, that since it is the
inviolable law of Nature, interwoven and joyned
with the very essence of this Disease, that the mat-
ter of the Disease should always be cast upon the
Joints; all that Emetick or Cathartick Remedies
can doe, will be onely to recall the Peccant Matter,
Nature had thrust out to the extremities of the body,
into the Mass of Blood, whence it comes to pass, that
what ought to have been thrown upon the Joints,
falls perhaps on some of the Inwards, and so he who
was in no danger, is like to lose his life. Which is
frequently observed fatal to them, that accustom
themselves to Purging Medicines, either to prevent
the Gout, or (which is worse) to ease the Paroxysm.
For when Nature is put out of her own way, where-
by as the best and most secure, she sends the Morbi-
fick Matter to the Limbs, while the Humours are
invited inwards to the Intestines, Patients, instead of
pains in the Joints, of which they have either none,
or but a very little, are almost killed with sickness
at the Stomach, Gripping in the Guts, Fainting, and
a long train of anomalous Symptoms. Indeed, I
am fully perswaded, being so convinced by constant
and often repeated experience, that all Purging, as
well by Lenitives, as by stronger Medicines, such as
are usually designed to purge the Joints, is exceed-
ing hurtfull; whether we Purge in the Paroxysm,
to diminish the peccant matter, or in the end to dis-
sipate the relics of the Disease; or in a perfect in-
termission and good health to prevent the coming of
a Fit. For I have experienced it both in my self
and others, that a Purge given at any of these times,
is so far from answering our ends, that it brings
the very mischief upon us, which it should keep off.
For first, a Purge given while the Fit rages, inter-
rupting Nature as she is busy in separating the mor-
bifick matter, and discharging it upon the Joints,
hath sometimes raised a great disorder in the spirits,
whereupon the Fit not onely grew stronger, but the
Patient was brought into manifest hazard of his life.
Again, Catharticks used in the end of a Paroxysm,
when they should have carried off the relics of
the Disease, onely did this, they brought a new Fit,
as severe as the former; and so the Patient flattering
himself with vain hopes, brings upon himself those
evils, which he had never suffered, had he not again
put the humours on a fret. Which Inconvenience
I my self have found, preposterously imploring
Physick Art's aid, to throw off, as I thought, the
relics of my Disease. Last of all, as to Purging
repeated at certain Intervals, and in perfect health,
that we may obviate the Paroxysm, and stop its en-
trance; although, it must be confessed, there is not so
present danger of inviting a new Fit, as was in the
former case, when the Patient was not quite out of
Gumhot; yet at this time also it breeds a Paroxysm,
and that for the causes above-mentioned; with which
mischief, if it do not presently punish the Patient,
yet it does not at all free him from his Disease, how
constantly soever, and at due Intervals, he take this
or that Cathartick. Nay, I have known some sub-
ject to this Disease, who paid their devotions to
Health by a Purge, not onely Spring and Fall, but
once a Month, yea, and sometimes every week,
yet not one of them escaped the Gout: which after-
wards, for the most part, handled them more cruel-
ly, than if they had abstained from all Physick. For
though

though the said Purging may carry off some part of the Continent Cause; yet since it conduces not one jot to strengthen concoction (from which it is so far, that it weakens it, destroying nature by a fresh wound) it is onely opposed to one Cause, and has not virtue sufficient for the Cure of the Disease. Besides, we must note, that through the same defect of spirits, whereby coctions are vitiated in people subject to the Gout, the consistence of their Animal spirits is rendered less firm and lively, whereupon it is presently scattered and disturbed by any cause which does a little more violently shake and disturb either mind or body, and therefore is very fleeting and dissipable, as it often happens to them that are either hypochondriack, or hysterick. From which propensity of spirits to disorder it is, that the Gout commonly follows any the least evacuation. For when the tone of the body is destroyed, which the firmness of spirits, while they remain in their vigour, preserves well compact and lively, the peccant matter, as having broken all bounds, is at its liberty, and upon this wound's being inflicted on the body, a Paroxysm presently arises.

Idem, p. 35.

XXXVI. But this method, as pernicious and hurtful as it is, has got some Empiricks no small credit, who all of them craftily conceal the Purging Medicine which they make use of. For it must be observed, that the Patient, while he is in his Purging course, has little or no pain; and if the Course can be carried on for some days, and no fresh Paroxysm supervene, the Patient will be quickly well of that wherewith he is at present held: But then he must pay severely for it afterwards, by reason of the disorder, into which the said disturbance of the Humours hath precipitated nature.

XXXVII. Then, evacuation of the peccant matter by sweats, though it doe less hurt than the foresaid evacuations, yet it is clear that it does harm. For though it do not retract the matter of the Disease into the bowels, but on the contrary, force it into the habit of the body, yet however it does harm upon these accounts: First indeed, because out of the Fit it forcibly thrusts out the Humours that are yet crude, and not so ripe as that they ought by right to be separated into the limbs, and so sollicit a Fit before the time, and even against Nature's mind. Then because in the Fit provoking of sweat doth force too violently the morbifick matter upon the part affected, and besides causes intolerable pain; and if the quantity of peccant matter be larger than that the part affected can admit it, it presently throws it on other Joints, whereupon there is a commotion and a great ebullition, or exstuation of Blood and other Humours; But if the body abound with a serous fluid that is apt to breed the Gout, there is fear of falling into an Apoplexy. Wherefore, in this Disease, like as in all other in which sweats are raised by Art to cast out the morbifick matter, and do not flow by the duct of Nature, it is exceeding dangerous to raise them so violently, or beyond that degree of Coction, to which Humours to be evacuated of themselves are arrived. And that most famous Aphorism of Hippocrates, *Concocted, not crude things, must be Purged*; has place as well in provoking Sweats, as in giving a Purge. Which is clearly evident from the Sweat that concludes the Fit of an Ague; which, if it be moderate, and answering exactly to the quantity of febrile matter, concocted by the preceding Fit, does remarkably relieve the Patient; But if Sweat be promoted beyond Nature's measure, by keeping the Patient continually in bed, then a continual Fever arises, and a fresh fire is kindled, whereas what was burning before, ought to have been put out. By the same reason also in the Gout, that gentle dew, which, for the most part arises in the morning of its own accord, after every lesser Paroxysm (several of which make one great one) mitigates both the pain and restlessness, wherewith the Patient contended all night;

but on the contrary, if this gentle dew, that is fleeting of its own nature, be provoked longer, and more violently, than the proportion of peccant matter already concocted by the last paroxysm, will bear, the Disease is thereby enraged. Therefore in this, as well as in all other Diseases, which I have had the hap ever yet to see, the Plague onely excepted, it is not so much the Physician's, as Nature's Province, to raise Sweats: because it is no way possible for us to know, how great a share of this same matter is already prepared to undergoe separation, nor by consequence, what measure we ought to observe in provoking Sweat.

Idem, p. 42.

XXXVIII. Whatever things therefore help Nature, in performing her Offices aright, where by strengthening the Stomach, that it may concoct food aright; or the Blood, that it may duly assimilate the Chyle carried into it, or by corroborating the solid parts, that they may better convert the Juices designed for their nutrition and augmentation, into their proper substance; Finally, whatever things preserve the divers organs of Excretion and Emunctories of the body in that state, as they may be able to void the Recrements of each part in their due time and order; these, and all such things, are good to fulfill this intention, and are properly called Digestives, whether they be Medicines, or Diet, or Exercise, or any of the *sex res non naturales*. Such Medicines are all in general as heat moderately, and are either bitter, or gently pierce the tongue, as being things that are gratefull to the Stomach, cure the Blood, and cherish and comfort other parts; such are for example Angelico and Elecampane Roots, Leaves of Wormwood, lesser Centaury, Germander, Groundpine, &c. Also common Antiscorbuticks may be added, as Horse-rhadiſh root, leaves of garden Scurvigraſs, Water-Cresses, &c. But since these sharp and pungent herbs, how gratefull soever to the Stomach, and conducing to it, in helping Digestion; do notwithstanding enrage the matter that hath been a long time bred, and encrease it, they must be used very sparingly, in comparison of those, that by their gentle heat and bitterness strengthen the Stomach, and render the mass of blood more brisk and lively. Several sorts of these curiously mixt, do better concoct the Humours, than any simple taken out of any one Tribe of them. For although, when we have occasion for the virtue of any Specifick Medicine, the rule hold good, The more simple the better; yet when we propole to our selves, to cure our Patient by answering this or that Indication, every several Ingredient contributes its share to the cure of the Disease: And in this case, the greater the number of Simples is, so much the more powerfully the Medicine will operate. Therefore, out of the Medicines mentioned, and those of the same nature, several *Recipe's* tending to this end may be made. I prefer the form of an Electuary in the manner of *Theriaca Andromachi*, before all others, as excelling in virtue; because the mutual confermentation of all the Simples increases their virtue, producing as it were some third thing, which, in equal quantity, is of more virtue in them conjoyned, than in any one of them. And for the sake of young Physicians, I discover the Remedy I my self make use of, which is compounded after this manner. *Take of the roots of Angelico, Calamus Aromaticus, Masterwort, Elecampane, Leaves of common Wormwood, lesser Centaury, white Horehound, Germander, Groundpine, Scordium, common Calamint, Feawerſew, Meadow Saxifrage, St. John's Wort, Golden Rod, Mother of Time, Mint, Sage, Rue, Carduus Benedictus, Southernwood, Flowers of Chamemil, Tansie, Lily Conval, English Saffron, Seeds of Treacle-Mustard, Garden Scurvigraſs, Caraway, Berries of Juniper, of each a sufficient quantity. Let all the Herbs, Flowers and Roots be gathered at those seasons, when they have the most virtue. Let them be dried and kept in Paper Bags, till they be fit to Powder. Let 4 ounces of each be well mixt, and made up with a Syrup of Canary Wine and Sugar, into the form of an Electuary of a due consistence. Let him take 2 drachms*

drachms morning and evening. Or in defect of this, let him use this following, Take of Conserve of Garden Scurvigrass 1 ounce and an half, of Roman Wormwood and yellow rind of Oranges each 1 ounce; of Candied Angelico, preserved Nutmeg, each half an ounce; Theriaca Andromachi 3 drachms; Pulv. Ari. Comp. 2 drachms, with a sufficient quantity of Syrup of Oranges; make an Elestuary. Let him take 2 drachms twice a day, drinking 5 or 6 spoonfulls of the following Scurvigrass Water upon it. Take of Root of Horse-Rhadiſh sliced 3 ounces, Garden Scurvigrass 12 handfulls, Water Cresses, Brooklime, Sage, Mint, each 3 handfulls; Orange Pills, No. vi. Nutmegs bruised No. ij. Brunswick Mum 12 pounds, distill them in the common Organs, till only 8 pounds of Water be drawn off for use. Of all Medicines commonly known, which help concoction, Theriaca Andromachi is the best; but because it is made up of very hot Simples, and besides abounds with Opium, the aboveſaid Elestuary may more conveniently be made of the chief heaters and strengthners, with Sugar dissolved in Wine, which will be more gratefull to the Stomach than Honey is. We must take care in the mean time, that those Simples be made use of, that are more gratefull to the Patient's palate; for, seeing they must use it a long time, i. e. almost as long as they live, it is very convenient, that it be not ingratefull to the Palate.

Idem, p. 49.

XXXIX. This must be observed above all, namely, that all Digestive Remedies whatever, whether they consist in Medicine, or Diet, or Exercise, must not be used by the bye, but constantly and daily with all diligence. For since in this Disease, as also in most Chronical ones, its cause is passed into an habit, and as it were a new nature; no wise Man can think that any light and momentary alteration, brought upon the Blood and Humours, by any kind of either Medicine or Diet, can attain the scope of Cure; but the whole habit of the body must be turned another way, and the whole Man must as it were be new forged again upon the Anvil. For neither is the case here, as in some acute distemper, when he that was as well as heart can with but even now, is on a sudden taken with a Fever, and sinks down, as if a Bridge broke under him, from a very good state of health, into a most dangerous disease. The state of the Gout is far otherwise: When a Man, by leading an intemperate life for many years one after another, omitting his accustomed exercise, consuming in sloth and idleness, or by too much study and unremitted intention of mind, and other errors of life, hath endeavoured, as it were on purpose, that the various ferments of the Body should be perverted, and the Animal spirits (which are the primary Instruments of Concoction) are oppressed, whereupon the preternatural Humours that are gathered, do at length break out, and give an overthrow, when they are exalted to the highest degree, and when the flesh is made soft, and the joints effeminate, they more readily receive the Humours falling upon them: And so at length another Nature, as it were, is by degrees superinduced, the pristine and natural oeconomy of the body being utterly overturned and destroyed: For these Paroxysms, which, in a manner, wholly take up the thoughts of the inconsiderate and less knowing sort, are nothing else but a series and order of Symptomes dependent on that method which Nature commonly uses in expelling the matter, which is the cause of the disease, outwards. Wherefore, he loses his labour, whoever goes about to stave off this disease, by using this or that Medicine, or Regiment likewise, onely now and then. But since this Habit is founded, and consists chiefly in the spoiling of all the Digestions, and in the loss of natural firmness in particular parts, we must obviate both evils, and as well the strength of Concoction, as the firmness of parts, must be reduced and restored by degrees, that is, according to the Model of the pristine and accustomed oeconomy of the body. And however impossible this may seem to be done fully and perfectly, not onely be-

cause every Habit is with great difficulty changed into its contrary, but because old Age, which commonly is companion and partner to this disease, doth violently oppose; yet, as far as strength and years will allow, the Cure must be attempted, and as the Patient is younger or older, so he will more or less escape the Tyranny of the Gout. Idem. p. 67.

XL. A Milk diet, either of raw Milk, or boiled, taking nothing else, unless a little Bread in it once a day, has been in vogue for 20 years last past. This did several good, beyond all other Medicines for this disease, so long as they exactly observed it; but as soon as ever he returned to the diet of the Healthy, were it never so mild and gentle, who had used himself to this, the Gout presently returning, handled the Patient far worse than before: for the Principles of Nature being by this course weakened, the Patient is rendered more unable to keep off the disease, and therefore afflicts him more dangerously and tediously. He therefore that thinks of taking this course, must first of all seriously consider with himself, whether he be able to persist in it all his life; which yet perchance he will not be able to do, be he never so resolved: For I know a Nobleman, who, after he had lived a whole year on Milk alone, not onely without offence, but with a great deal of pleasure; all which time he went to stool once a day or oftner, growing costive on a sudden, and the temper of his body being changed, but the resolution of his mind still continuing, and his Stomach at length loathing Milk, was forced to give over. Idem. p. 75.

Medicines especially made use of by eminent Physicians.

1. An admirable Elestuary for all Gout Pains, which I have often used with good success. I declare it eases them presently without trouble, it cools the fiery heat, and so qualifies the Part, that I have seen some sick of the Gout recover the same day they took this Physick. It is made thus; Take of white Hermodactyls cleaned from their upper coat, Diagridium each 3 drachms, Costus, Cummin-seed, Ginger, Cloves, each 1 drachm. Let them be powdered, and with some proper Syrup, or with Honey and White-wine boild together; make an Elestuary. The dose is from 3 drachms to 4. Jul. Caf. Baricellus, horti. Gen. p. 50.

2. Take of Germaner, Groundpine, lesser Centaury, Aristolochia rotunda, Sage, Betony, each 1 ounce, of the best ripe Guaiacum 8 ounces. Make a Powder. By this one Remedy the Gout may be perfectly cured, except a Man will lead Sardana-palus his life. The dose is 1 drachm in the morning for several weeks. Crato, lib. 6. Conf. 100.

3. This is reckoned excellent for prevention; Take of pure Spring-Water 10 pounds, the Wood of Mastick-Tree cut very small 3 ounces. Let them boil an hour, drink of this Water at Dinner and Supper: For it strengthens the Stomach, helps Digestion, and prevents Defluxions. This was given me as a secret by a very skilfull Physician. Rod. à Fon-leca, Tom. 2. Conf. 59.

4. In a hot cause I think nothing is better, if I may conclude from my Experience, than the Powder of Wild Cichory Leaves dried in the shade, and gathered in May. A drachm or 2 scruples may be given in a little Chicken Broth, without Salt, in the morning 4 hours before dinner, and in the evening as he goes to sleep, either with a spare Supper, or with none at all. Spigelius de Acribitide, p. 84.

The outward Medicines are either indicated before, or may be sufficiently compensated by this single one described in the following Discourse, which seems of more moment in the Cure of the Gout, than all that our great Physicians have relied on, whether inward or outward, put together.

The SUM of
WILLIAM TEN RHYNE'S

M. D.

Treatise of the Gout.

PART. I.

The Aitiology.

Ten Rhyn.
de Artibrit.
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Although it be besides our Design to meddle with Theory; yet I have two Reasons not to omit this of the Gout. 1. It's extraordinary Novelty shall I say, or, Antiquity? New I must call it, because lately transmitted to us from the East Indies; but it must be really Ancient; For it makes up one half of a Japan Doctour, as the Needle makes the other; and they derived this moiety of their skill from Ingenious China, where perhaps its date may be so old, that the eldest Chronicle in Europe cannot Synchronize. But certain I am, it is as Ancient as our Father Hippocrates, as the Issue will prove. 2. Its extreme Necessity: For the reason why the Gout has been hitherto incurable by us Europeans, is the Ignorance of its true Cause (as Prosper Martianus in his first Section frankly acknowledges.) Wherefore, to doe the Learned Grecian, and the Ingenious Barbarian both right, and my Countrymen good, I thought it a pity to let the *Moza* go without its Reason, lest it should lie undiscerned under a multitude of Plasters and Pulveres good for the Gout, and for want of good Credentials it should not reflect the honour due to its Authours, nor afford the tortured man that ease, which it is able to procure.

To avoid therefore any farther Preamble, and not to meddle with Etymologies, we thus describe the Gout. The Gout is a preternatural, little, and for the most part invisible, and inwardly latent Tumour of the Periosteum, arising from a dry and malignant Vapour, which, by the contractive motion of the Heart, is forced with the Blood through the Arteries to the Limbs, and to the Joints thereof especially, and violently separates the Periosteum from the Bone; into which Interstice this Vapour being once forced, doth stick there most tenaciously, and distend the said Membrane of a most tender sense, and so is the cause of that sharp Pain, and sometime hinders the Member it self in its motion.

I call it an inwardly latent Tumour, to distinguish it from other stultent Tumors; for whereas these lie between the flesh and skin, or interfices of the Muscles, the other lies hid under the thin film, that covers the Bones.

I call it an invisible Tumour; not that I am ignorant how in this Disease there are Swellings conspicuous enough; but lest I should stumble upon the same Stone, at which so many eminent Doctours for several Ages have tript. For difference should be made between a Disease and its symptoms, between that Swelling that is peculiar to the Gout (which though a small one, yet is the onely cause of Pain) and that Swelling, that is subsequent to the Pain of the Part: For at the beginning, these Pains are without any Swelling; though afterwards about the State of the Disease the Part affected often swells.

The Practice of the Ancients might afford considerable Arguments for this latent Tumour, as their cutting and burning; Hippocrates, lib. 3. de morb. speaking of the Cure of the Pleurisie, saith, If he do not spit, and it give some signs of it on the side, cut or burn him. But the most cogent may be drawn from the Panacea of China and Japan, i. e. Burning by *Moza*, and from Acupuncture in Japan, which puts it out of all doubt,

that most Diseases arise from a noxious Vapour, the cause of some invisible Tumour.

And that a Vapour is the Cause, I have Hippocrates his authority for it, lib. de Flatibus. Who saith, That we live of Meat, Drink and Air; and then he shews, how the Air especially is Authour both of Life and Death to all Animals. He saith, That this Air or Spirit which in our Bodies we call a Vapour, is the sole cause of all Diseases. He instances in Fevers, Griping of the Guts, Defluxions, Dropsies, Apoplexies, Epilepsies, and concludes, that it holds true in all other Diseases; but that it would be tedious to particularize them all. When he comes to Defluxions (under which the Gout has been ever ranked) he hath these words; The Spirit is involved in the Blood near the narrow Veins, and the thinnest part (which I judge is the Vapour that causes the Gout) is thrust out by the Veins (which, with Hippocrates, is a general name, both for them and Arteries) when a great quantity of this Moisture is gathered, it runs by other passages, and when it stops in any part of the Body, there a Disease is contracted.

I therefore conclude with Hippocrates, that the Gout arises from filthy diseased steams, or from a flatulent Ventosity, upon which, if any Humour follows, it was the Vapour that made way for it.

And not onely Hippocrates, but more modern Physicians, have held, That the Gout comes from Wind. Guainerius, and Matthæus de Gradibus were of that opinion. Also Guido de Cauliaco, a stout Voucher of the 4 Humours, tells how he read in the Pope's Canons, that the Gout arose from Vapours. That Royal French Surgeon Paracelsus, was of the same judgment. Several eminent Physicians hold Vapours the cause of the Tooth-ach, Bastard Pleurisie, Colick, Epilepsie, and of Fits in Women, so that they are called Vapours in English. And I question not, but many Diseases differing onely in Name and Place, are of the very same nature with the Gout; especially all those into which the Gout and they mutually degenerate.

Furthermore, the China Physicians say, Our Bodies are governed by 3 things, i. e. by the innate Heat, the radical Moisture and Spirits, which they hold to be the Vehicle of the Heat, and the Lungs (from which they begin the Circulation of the Blood) to be the Elaboratory of the Spirits. Upon the temper or distemper, excess or defect, conjunction or separation, good or bad constitution of these 3 things, they reckon life and death do depend: And they wholly ascribe the Gout to noxious Spirits or Vapours.

These Vapours are as different, as the several Parts and Humours in the Body, that cause them. Their material causes are first Meat and Drink, thence come various Humours, from each of which a different Vapour ariseth. Their efficient causes are chiefly the Stomach, which, as it is strong or weak, hot or cold, full or empty, breeds a different Vapour; and then all parts of the Body, where there is any concoction, fermentation, ebullition, or effervescency of Humours, may breed different Vapours. Administring causes are all the six nonnatural things. He that would be better satisfied, let him read *Fle-nus de Flatibus*.

That it is a malignant Vapour, the Vehemence and intollerableness of the pain do prove. Nor do several Authours deny it, especially Galen, who assigns good reasons for it. Because the Gout never comes to Suppuration. Because this Vapour causeth more intense pain than any Humours, while they suppurate; Because it creates no trouble in any part by which it passes, except the Joints. But, which is of greater moment, the Cure proves it: for whilst in the Gout men are burnt with *Moza*, sometimes Wind hisseth out of the Burn. And if it be kept open like an Issue, an ichorous, filthy, malignant matter weeps out of it, which stinks most offensively.

All grant that the *Periostrum* is a very sensible Membrane. Now this Vapour doth not torment it on the out-side, but it insinuates it self between the Bone and it, and so parting the delicate and extreme sensible Membrane from its Bone; and, distending it, causes a raging pain. And the Tumour lying so deep, no wonder it cannot break prison, till way be made by a red hot Iron, or by the milder Burning of downy *Moxa*.

This Vapour, the cause of Diseases, extends it self as far as any *Periostrum* enwraps a Bone. And so the Gout may come under as many denominations as it hath Parts to afflict. The Learned Languages have Christened onely three, the Hand Gout, Gout in the Feet, and the *Sciatica*, for all which England can afford no more proper name than Gout in general, or what it borrows from other Languages.

As for the antecedent Cause of the Gout, I cannot impute it to any particular part. But, I think, whatever Part, or Humour therein contained, is apt to breed a Vapour; from that same part the Vapour may be carried to the Heart by the Veins, and so from the Heart communicated to the Limbs and Joints by the Arteries. Which is the Reason that several are troubled with Fevers, Swoonings, Palpitation of the Heart, and infinite other diseases, when this Vapour is not cast off to the out-parts; But with some the Gout is reckoned a good sign of long life. This Circulation of the Vapour is a reason also, that the Pains remove from the Feet to the Hands, and from any one part to another. And the Vapour being cast off by the Arteries, might be the reason why in Ventosities the Ancients approved of Arteriotomy beyond Phlebotomy; and does indicate, that the burning with *Moxa* should be where the Arteries beat most, which is not duly observed by the *Chinois* and *Japanois*. If the Part be so strong as to return the Vapour by the Veins, or if any one be so much an Empirick as to repell it to the Heart, it proves often Tragical. Wherefore I do caution all Practitioners not to use Repellents by any means.

PART. II.

The Diagnosticks.

A Physician can no more direct his Remedies without observing the Symptomes of a Disease, than the Master of a Ship can steer his designed Course, without observation of the Stars and his Compass, and a competent knowledge of the Shelves on a dangerous Coast. Therefore we should reckon as much of the knowledge of the Symptomes, those especially called Pathognomick, which live and die with the Disease, as we would of the Cure it self.

Impediment in Motion and Pain are inseparable signs of the Gout, which spring, grow up, come to a pitch, decrease and vanish with it, sure tokens of an inward latent Pain, that rarely is observable by the eye. With which we rank the Swelling of the Veins, and the violent beating of the Arteries for Signs and Symptomes, always concomitant to the Gout; because we find them by experience.

The Pain of the Gout is a piercing, distending, throbbing, deep, continual and bitter Pain; each of them a certain sign of the *Periostrum's* being afflicted. It is piercing, because a Membrane of a most delicate sense is hurt; Distending, because the Blower up of the Gout separates, raises and stretches it; Throbbing, because the Authour of this Disease passes the Arteries, and makes the blood move inordinately, while it is forced into the part affected; it must be deep, because in the Membrane about the Bone; Continual, because the Vapour pours in continually into the pained part, as long as it hath any matter to supply it; And then it must be sharp, because, while it abounds in quantity and malignity,

the Vapour cruelly and violently molests, fills, separates and distends a membrane of most exquisite sense, nay, and sometimes dissolves continuity, as the violence of the Pain doth argue.

The other Symptome is Impediment in Motion, of the same nature and degree with the former; which happens not through any fault in the Member, but onely in the *Periostrum*. And this difficulty of Motion appears and disappears with the Gout.

And these two inseparable Companions follow the Gout, as a shadow does the Body; the rest that are reckoned up by Authours, are but Accidents of Accidents. So Fainting, Watching, Inflammation, *Erysipelas*, and that Swelling from the flux of Humours, are all caused by pain.

Now let us a little farther consider this serous Tumour, because most Authours taking it for the receptacle of the Arthritic Matter, have made no difference between it and the Gout, and so have made strange Mistakes about the Proximate Cause of the Gout. Would Men but consult their Senses, they might find, that this Swelling does not presently begin, nor always end with the Gout. And although in some the Swelling follow the Pain immediately, yet whoever narrowly considers the thing, he will never find the Pain and the Swelling of the same date. Nay, when the Pain is come, the Swelling may be prevented by a skilfull Physician, if he go about it soon enough, namely, by dispersing the dolorifick Vapour in time, by some convenient Means; as by that incomparable way of Cure in *China* and *Japan*, by burning with *Moxa* (of which in the Cure) I have experienced it hath been done a thousand times. Nor doth the Swelling end with the Disease: For as the Swelling rises when the Pain is sharpest, and the Disease at the height, so, when the Pain is over, the Swelling often continues. Therefore it is the inward hidden, not the manifest outward Tumour, which causeth the Gout; and the outward is onely a Symptome of the inward: For all Writers agree, that Pain causeth a flux of Humours to whatever part it is in. But it would not be amiss to consider, why upon the approach of the Humours and Swelling, the Pain generally abateth, as in the Gout and Tooth-ach? According to this Hypothesis, the reason is, because the flesh, by the afflux of Humours is softened, and so presses not so hard on the *Periostrum*, as before; and the *Periostrum* it self being moistened with the same Humours, its Pores are opened as in a Bath, and so way made for the noxious Vapour to depart. Not but that a Conflux of Humours doth sometimes more mischief than the Gout it self, by dislocating and knotting the part; which are the usual effects of Empiricks Bathings and Anodynes, but may easily be prevented, as hereafter shall be shown in the Cure.

Which being stretched by the included Vapour, is upon the motion of the Joint compressed, and so the pain encreased.

PART. III.

The Cure.

Hippocrates saith, That the Instrument cures what Physick cannot; Fire cures what the Instrument cannot; and what Fire cannot cure, must be reckoned incurable. Now the Gout hath been held incurable for many Ages. Victorious Charles V. was conquered by it, and would break out into Expressions of this nature; The best Medicines for the Gout are to Weep, and Suffer; Therefore he used not with *Asa*, onely to seek to the Physicians: but he sought the Lord. But that which hath hitherto rendred the Gout incurable, was the ignorance of its Cause and Remedy, which are now happily both discovered. The Cause we have formerly discoursed of, the Cure is Hippocrates his last, and Nature's

Nature's utmost, Fire. To reckon up all Cauticks, Potential and Actual, from a Sinapism to a Burning-Iron, and to shew their use among Ancient and Modern Physicians, would be too tedious. I shall therefore fall upon the relation of a safe Antidote, for this stubborn Disease, and cruel Punishment of Mankind.

In my travel, while I lived among the Dutch at *Jacatra* in the *East Indies*, as Physician to the Noble *East India Company*, I was acquainted with Mr. *Herman Busheff*, Minister of God's Word (now dead, and lamented by all good Men) who was not solicitous for the health of his Brother's Soul onely (which was his proper Function) but for that of his Body also. He had, after many severe Fits of the Gout, and the trial of several Remedies, happened upon a true Anti-arthritis, which he freely communicated to me, and gave me his own thoughts, and desired my opinion of the thing. I, in civility, but with a doubtful mind, admiring the Paradox, commended the method of Cure, and to say nothing of its cruelty, I praised the benefit of it: He was very urgent with me for my Opinion, therefore I took my Pen, and while I was preparing for a Voyage to *Japan*, I writ my Friend some Objections, who, being somewhat disabled by his last Sickness, answered them in short. When I arrived at *Japan*, I found all people marked with deep and large Scars all their body over, and not for a punishment. Then I examined more accurately by Experience, the things that I had onely reasoned upon with that Reverend Person formerly. What I found consonant to Truth, I retain'd, what I found dissonant I rejected, and gathered my observations together. It would be tedious to relate all of them; therefore I shall confine my Discourse to the Cure of the Gout used among the *Chinois* and *Japans*.

Provident Nature, that is solicitous for the Preservation of Mankind, seems self-sufficient in all parts of the World; so that Barbarous Nations are no more destitute of a convenient stock of Remedies, than they, who by long Art, difficult Judgment, and dangerous Experiment, have found out infinite Remedies for Diseases, whereby Physicians are rather confounded than informed, and Patients overcharged than relieved. And Nature's goodness is seen in the *Japan* Nation more than in any other; where Health is encountered with 3 Enemies, their Manners, their Luxury, and Idleness. The first debilitating Hurt, which they suffer from their Manners, is in their Clothes, especially in Coverings for the Head: For these people, by a legal Custome, generally shave the Heads of their Children quite bare: In their youth they let their Hair grow long and thick; but they shave it to the very *pericranium*, upon the Coronary Suture, where it is joyned with the Sagittal, and where the Skull opens the most: But when they are come to Man's estate, they shave their Crown round to their Ears, and keep it smooth, and reckon it very gentle (which they use at twenty, and rarely neglect when they are above that) to go abroad with their Crowns shaven; upon which shield of their Brains all the Injuries both of a Winter and Summer Air do light: Some of them indeed in a very cold Winter cover their weak Heads with a Silken Periwig.

Furthermore, their decrepit Old Men, they that after the common custome of the Country lead a solitary life, or Monks (of whom here is a vast number) they that profess Physick, and some Servants to Noblemen, those of them especially that serve in the Kitchen, or Bedchamber; old Maids and Widows, without any difference of Sex or Age, shave their Head to the skin, not leaving one hair. Whereupon the Brain, the seat and Metropolis of cold and viscid Humours is filled with them, and they afford Matter for Vapours, which, according to *Hippocrates*, are the cause of all Diseases. This Vapour running down the Spine affects the Nerves, and so may

affect the Membrane of the Bone, which is onely a product of the Nerves. I have often observed, that either through Necessity (that is, either when they are forced to go before their Magistrates; for they never appear before them unhaven; or upon Holy-days, which none but profane persons keep with long hair) or through finery; they sometime shave in the midst of Winter; upon which a shivering all the body over, Fever, Head-ach, and other mischiefs have followed. Besides, they all go barefoot, unless in extreme Age, or Winter, and then they cover their feet onely to the Ankles. Then their Luxury (in which most of the *Japans*, especially their Great Men, place their chief good) doth most Beast-like exercise them too much in Venereal Acts, from the beginning of their Youth to very Old Age, who being thereby debilitated, are liable to Vapours, and so made subject to many pains. Thus the *Japans*, to whom Nature hath given a strong Body, a temperate Clime and Soil, who never knew the Contagion of a Plague, nor are sensible of the Devastations of War, the rich of them are consumed by Pleasures, the poor by Famine, and both by their Manners. Hence, I say, they bring upon themselves innumerable Diseases, especially those that come from the Head, and such as trouble the Nerves, Tendons, Ligaments and Membranes; They have Epilepsies, Apoplexies, Palsies, and all Diseases of the Brain and Nerves frequent among them, but nothing more than Blindness and the Gout. They reckon Blindness generally incurable, though it arise for the most part from Suffusions, which if they knew how to remove, as well as several of our Countrymen, they might restore sight to very many. As soon as they perceive the signs of Blindness, they lead a Melancholick life, without hopes of ever recovering their sight, nevertheless giving themselves, as long as they are able, to *Venus* unmeasurably; and to make the matter worse (which is a double blindness) they shave their whole head. They cure the Gout speedily and easily, unless it be inveterate. They know not the use of an actual Metallick Caustery, nor of a Lancet, except a very few, who learned it of our Surgeons. Among themselves they have, by the guidance of *China*, adapted a two-fold method of Cure to the foresaid Diseases, namely, Acupuncture, and burning with their *Moxa*. Their universal Menstruum is Water, where they borrow a Medicine of the Animal, Vegetable, or Mineral Kingdom. And I profess I have not met with a Disease among them, which the unskilfulness of their Physicians had not either caused or increased. And this concerns not onely the richer subjects (for the needy die without comfort) but the Princes of the Empire themselves, who (I speak by experience) out of their hatred to Christianity, chuse rather to die than use our help; although they value the judgment of any one of our Countrymen about a Disease, if he be onely a Quack, but they difficultly admit of our assistance. And I think it is God's peculiar Providence, that, as he hath wisely created all things, he also defines all by a set number: for I am of opinion, that in a few years, a Nation so fruitfull in Children, would be so numerous, as to eat one another up; but that the preposterous Cure of their Physicians, more mortal than their Diseases, takes off a great number of the Rich, enfeebled with Ease and Luxury; and that Famine sweeps away the greatest part of the Poor, which being contrived by the Tyranny of the Great Men, makes an unjust slaughter among the Subjects; however gratefull to Men in Power, while Dearth brings an undeserved devastation upon City and Country.

But kind Dame Nature compassionating the Calamities of this Country, and sympathizing with the Grievs of the People, hath given them the Juice of wholesome *Ambrosia*, and an Odoriferous *Panacea*: And she being an earnest Preserver of her self, affords

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present Remedies for the most common Diseases in great abundance. She hath enriched with this gift of self-sufficiency, not Europe onely, famous for Arts and Sciences, and Egypt for Physicians, but the whole habitable World, and all the parts of it, though never so barbarously peopled. That was clear in the desert Country of Japan; when in the first peopling of it, it was possesed onely by some Runaway Chinois. For Mugwort seems as if it were planted by Industry all over the Country of Japan (where, notwithstanding it grows plentifully of its own accord.) And this is their onely refuge in most Diseases, this is their most pretious Panacea in all sorts of Pain and Swelling; whose use is well known to every Japonois; nor can you find one in that vast Empire, who uses it not. But the Japonois are negligent Cultivators of Gardens, and Herbarism: for they commit the growth of Plants (whereof there is great scarcity in some parts of the Country) to the care and conduct of Nature, and prefer the neglected face of the Plain before the fine and artificial ornament of Gardens. Because Ground which has any likelihood of fertility, is presently either plowed or dug for the profit of Rice, or Bread-Corn, and the Plants that remain on the Way-sides, are either cut to feed Horses and Cattel; or before the planting of Rice, they are thrown into the Field to rot for dung. Most of the other Tracts of Land are either barren Mountains, or incultivated Woods. They seek their chief Refuge, as for what concerns Physick, in Mugwort, and find it: Nor is there a Plant in all Japan more frequent than this: It grows plentifully in the Fields and Way-sides: The Japonois call it *Jomongi* and *Nophouts*, and when it is dried, *Moxa*. This is the Mother of herbs, that Royal Plant, which the Ancients called *Parthenis*, because it cured Maidens Diseases; the Italians call it *Valentine*; many stile it *Self-potent*; this is that Messenger of the Graces, which *Artemisia*, Wife to *Mausolus* King of *Caria*, honoured with her own name, as an excellent *Phylactery*; some would derive it from *Artemis* *Ilithya*, i.e. *Diana*, because it particularly cures Womens Diseases.

This therefore so highly celebrated Mugwort, when it is turned into flame and ashes, does the most good, because while it hurts, it cures; and it cures wonderfully the profound racking pains of the Limbs, oftentimes in a moment, which is a thing of the greatest moment. It were too long to run over all the Uses of this Remedy in most Diseases; wherefore I shall confine my self to the use of Mugwort in the Gout, especially according to the Practice of the Chinois and Japonois, premising onely a few things. *Matthiolus* upon *Dioscorides*, says, That 3 drachms of dried Mugwort Leaves powdered given in Wine is good for the Sciatica. *Weikardus* also makes it a Specifick for the Gout: for in *Thesaur. Pharmaceut.* he saith, That Mugwort roots boiled with Viſuals, like Parsly Roots, help a Man wonderfully. For many onely by the use of them have been cured of the Pain of the Gout. But if instead of the Roots boild, and the Powder of the dried Leaves, these Physicians had used the Down of the dried Leaves, they had done the business. For *Celsus* speaking of the pain in the knees, saith, All such pains when they are inveterate, scarce go off without Burning. *Hippocrates* is very copious about the ways and benefit of burning, wherein he seems, in my opinion, to have proposed a threefold scope; The mitigation of Pain, evacuation of an Abscess, the Restauration of a weakened or dislocated Limb. Therefore, according to his Laws, Whereſoever Pain is gathered, do you burn; nay, Whereſoever any Pain (except of the Spleen) is felt, do you burn, for so he will be presently cured.

While he shews the place that should be burnt, and patronizes our Opinion, he saith thus; This (meaning Bloud) runs by the Thigh through a sanguifluous vein, and whereſoever it stops there is a very manifest pain, troublesome indeed, but not mortal: Therefore, if pain gather to one place, and abide there, and cannot be removed by Medicines, burn it, in whatever place the pain shall be. Nor is

he less clear, where he says; And this indeed is a long disease (meaning the Gout in the feet) and troublesome, but not mortal; if therefore any pain remain in the Toes, burn them a little above the knot in the Joint. Not onely, that the hurtfull Flux of Bloud may be staid; for if you burn a Vein in any Grief (for the sake whereof it is burnt) the Vein does not heal up, but it is good for the Flux, for if it be burnt, the Flux is stopt: But also that the Vapour, that Disturber of the Bloud, may be disperſed. Where, as in many other places, by a Vein, according to the Ancients way of speaking, we must understand an Artery: for it beating quicker and higher is the true Index of the Pain.

Concerning the second Indication in Burning, the same Person saith; If both the Part be pained, and the Flesh be subnuous (or as in several other places, putrefying) Burning is the best remedy for them. But above all things *Hippocrates* his Golden Rule is to be observed by our Pyurgian; What things you ought to discharge, whither they have a tendency; the same things you ought to discharge by places convenient.

But what he saith of the restauration of dislocated parts by burning, the third Indication, you may see in his Book de *Articulis*, and other places. For it would be tedious to mention all the testimonies and precepts of *Hippocrates* about Burning.

He had variety of caustick Matters, as Iron, Raw Flax (which is nearest *Moxa*.) And if there be any pain left in the Toes, burn them, and you must burn them with raw Flax. He made use also of Box Spindles dypt in scalding Oil. And so the Chinois dip their burning Hurds (when they are minded to burn deep, and make the Sores run long) in scalding Oil. *Hippocrates* used fungi also.

But the Practice of China and Japan doth supply us with a gentler and safer Remedy than any of these. The greatest part of the Practice of Physick there, consists in burning with herbaceous Hurds, the success whereof is almost as great in the event, as the plenty and diversity of cases. At first I wondered at, nay almost detested a remedy so unusual to us Europeans, till convinced at last by repeated success, I my self patronized so beneficial a Method of Cure. I was persuaded into a good opinion of it, by the frequent experience Mr. *Herman Buschoff* had told me of it. But I was not fully satisfied, till in Japan I saw Thousands of Instances; for there is scarce a Japonois, that has not made trial of it in himself; for Diseases coming, as I think, from Vapours; or as Authours teach, from cold-Phlegm.

When I first arrived at Japan, one of our Interpreters, a little more curious about Physick than the rest, came to me halting, and leaning very much on a staff: He complained of the Gout in his knee, and as I was discoursing him about this Remedy, he told me, Perhaps to morrow you will admire the virtue of so present a Remedy: The next day he return'd according to promise, and then walked without any impediment; he shewed me his knee plastered up with Japan paper onely, to defend the Sores that the Burning had left, which he shewed me; And thus (quoth he) we remove all Pains from our Limbs. But afterwards innumerable examples did no less remove all doubt from my mind, than this Burning did the pain from the Limbs of sick people.

The Gout is cured by removing its Cause, i.e. by evaporating the Vapours that lie between the *Pertæum* and the Bone, after this very manner, which I observed with my own eyes: for Mr. *Buschoff* was mistaken in this, either through the unfaithfull or ignorant Relation that he received. Their way of preparing it is simple. They gather the smaller Leaves or Tops of broadleaved Mugwort (for Japan knows not, at least as far as I could find, the small leaved, as Herbarists call it) they dry them in the shade (then they are called *Moxa*) when they are dry they rub them with both their hands, they cast away the stalks, the fibres of the Leaves, and all the useles relicks and rubbish; but they keep the Down

L. de Af-
fect. Scilicet. 19.
20.

L. de Af-
fect. Scilicet. 21.

De locis in
humid.

L. de artic.
Scilicet. 45.

L. de Af-
fect. Scilicet. 32.

L. de Af-
fect. intern.
Scilicet. 31.

Down for Use, which is like Cotton, if it be right prepared. And this general way of preparing *Moxa* all over *China* and *Japan* is known to the meanest sort; and not onely to their Physicians; nor is the use of it more common than the thing it self. Then they take this Down made of dried and cleansed Mugwort, and between their Thumb and Fore-finger, form it into a little pellet something bigger than a small Pease, with a sharp prizm and broad base; Or they put the cotton of the Herb purified in a Paper, and roll it with their flat palm, that so the plantary Wool may be close, and more equally compact, from which they cut off their pieces, which are about twice as thick as a Writing Pen, these they lay on the place grieved (when they have wet it with their finger moistened with their spittle) and with a Candle or some other way they give fire to them (oftentimes one after another) that by this means the Tormentor of Mens Joints, and Authour of all pain may be got out and sent going. They set these Tents on, either with the tops of their fingers, or with a flat hand: But here the Pulse of the Arteries in the place affected must first be felt (which in *China* and *Japan* they take no notice of) that we may be ascertained where the Vapour resides. But, according to *Hippocrates*, the Body must be kept in the same Posture, as these Nations also observe. This matter is easily combustible, if it be prepared as it ought: for the *Chinois* carry it about them in Tinder-boxes. They touch the top of these Hurds with a lighted Match (which the Rich Men in *China*, not in *Japan* as to my knowledge, make up with Perfumes) when they have given fire, the gentle flame turns not all this little Turret into Ashes, but leaves a little Segment of it in the Base, which draws the *Epidermis* with no Violence, nor raises any Blister, unless it may be a very small and superficial one: But for the most part it leaves onely a dusky Spot, although the Burning be renewed several times upon the same part, and according to Art a Wound be endeavoured: Because like a Cupping-Glass (for this burning with Mugwort serves the *Japanois* instead of Cupping, Scarifying, Blistering and Blood-letting, which last depresses the vigour of the Blood and Spirits without Diminution of the Morbifick Matter, especially in hot Countries) it imbibes the Humours, that they do not corrode the skin: for the Humours at this Burning run like lightning. Nor is this Burning (which beside the great ease it brings, highly commends this sort of Remedy) very painfull: for it is a soft Down, nor is the flame thick, or great, nor does it penetrate the skin; and the Conflagration it self is momentary.

This Burning in weaker places is commonly reiterated three or four times; but in other places, if the Patient be strong, and the Vapours lie deep; for example, in the *Sciatica* (in which *Hippocrates* orders many large scars to be made with Burning, where the *Chinois* and *Japanois* Burn many small ones near one another) it is repeated sometimes twenty, thirty, nay, above fifty times; till that mischievous Vapour exhale, and there is no fear of any mischief upon it, nor any remainder of Pain: But as soon as the Burning is over, you may handle the burnt part, or press it as you list. For this burning of *Moxa* allwages the Pain, and for the most part takes it quite away.

Some to the Utility of this Burning will perhaps oppose a contrary Experience, and say, That by vexatious Burnings, Gouty persons do spend their Animal and Vital Spirits, spoil Nutrition, and (which is the least of all) disfigure the skin with scars. But would my Opponents go to *China*, or *Japan*, they would there find, that People of every Age, Sex and Condition, in every approach of Pain, whether inward or outward, and at the appearance of any Swelling, do burn with their *Moxa*; and, that the oftner they burn, the stronger they grow; nay,

that when they are well they burn, for prevention of any Disease they fear: Although, I confess, it sometimes happens, that by a long, violent, and often repeated Burning, they sometimes fall into Swoons, and that this Burning in hot Regions (where more Spirits go out by the pores of the Body always open) does less good than in colder places, where the habit of Mens Bodies is contrary. Besides, tender and lean People should not be burnt so violently, nor so frequently, as those that are strong and of a full Body. And as for Scars, I ever thought Health was to be preferred before Beauty. Therefore, what *Pliny* said of Fire in general, I may truly say of this Burning Down; And there is a medical Virtue in the very Fire; especially in that of ours. So *Galen* allows, that the help of Fire is beyond all Physick, when he saith, that Burning is a Remedy which empties the whole substance of that which troubles: Which *M. A. Severinus* interprets so; There is no Disease so difficult and impenetrable, that cannot be conquered by the force of Fire, especially if we exactly knew its strength and use: For as the Flame is fed by the Air, as its food and fuel; so this Artificial Burning in noxious Vapours is more kindled by their Bellows, and, which is the chief thing, it exhausts and disperses them.

Yet we must assist Nature, when she is weak, and a small Escar is to be separated after this manner; Bruised Garlick must be laid on the Escar, which again must be covered with its own skin moistened in ones Mouth, and so laid on to keep it instead of a Plaster; and then after 24 hours the Garlick Plaster must be taken off; for the Scab will be ready to fall off, behind which, when it falls, there remains a pellucid Scar in the Cuticle, very rarely a round Blister; which, nevertheless, if it do arise, must be gently cut with a pair of fine Scissers, that way may be made for the peccant matter; nor must the Scab be taken off with such harsh Instruments as a Penknife or Razor. This Escar is easily taken away, if you take but a Leaf of Plantain (the common cure for Wounds and Ulcers among the Country people in *Japan*.) Bete, Cabbage, Syri, &c. roasted a little, and rubbed in ones hands to make it soft, and so apply it, and wait with patience till the Escar fall and it heal. Where you must observe, that if the Plantain Leaves (first laid on hot Coals, till they grow limber and fall together; then they must be laid on the Palm of the hand, and spread open again) be applied hot and moist on the ribby side, it will run matter like an Issue; but if they be applied on the smooth side (when the Sore requires healing) the Wound closeth (which while the *Japanois* neglect, and cause their Sores to abound with unctuous putrilage, and the flowing matter to grow crude again, by this Burning they are disfigured with filthy Scars) quickly, and without any notable Scar, more conveniently than the best Plasters, which, because of their fat, should be rejected. But the falling of the Escar is not at all to be hastned, although it stick never so slenderly to the Sore; that work must be left to Nature, nor must the running of the matter be stopt, nor must they by putting in of Pease, be made mere Issues; but of its own accord let the matter ouze out as much as it will: Wherefore the Leaves are to be kept on with their fibrous side to the Sore, because so the diseased matter runs out more freely; but with their smooth side to it not so long, because then the Wound would close up too soon; the nervous side of the Leaves therefore must be kept to the Sore, and that they fall not off, must be bound on, or kept on (where the Place will not permit binding) with sticking Plasters, and in twice 24 hours time at least, must be renewed. But if Plantain (which abounds in *China* and *Japan*, where this method of Cure is most used) be wanting, Cabbage, Bete, Coltsfoot, Ivy, or the like, may be used in its stead: Which, if they should all be wanting, as at Sea, *Diapalma*, *Basilicon*, or which I

like better, *Sticticum Paracelsi*, or some such Plaster may be used. I remember I have seen evident marks of this Burning among the Inhabitants of the Island *Timaon*, and them of *Jawa*: And I kept a *Malabar* slave, who had deep Scars of this Burning (which was performed, as he said, with dry Leaves) remaining in his Buttocks.

But it is not enough to shew the Port, unless likewise you shew the Rocks, which may endanger your striking. The *Japans* therefore, whose practice of Burning I here especially teach, do give in charge;

1. That in burning Fevers, whether remitting or continual, so long as they observe their Periods, or have their Paroxysms with their Accidents, Mens Bodies must not be burnt with *Moxa*; they having found by experience, that the Fever and its Symptoms are thereby encreased.

2. They forbid the use of *Moxa* in the Fit of an Ague, which the *Japans* carefully observe; but out of the Fit, they earnestly perswade it, and diligently administer it.

3. They forbid Burning, when one hath got a Cold; otherwise they say, a Fever, and often a most grievous one doth follow, especially if they do not wrap themselves warm with clothes: Which they always enjoin in the administration of Burning, for fear of a Fever, as they find by experience; for otherwise the external cold of the Air, when the pores are opened with Burning, out of which the Vapours went, insinuates it self, and so the first Disease turns to a worse.

4. They refuse also to burn Teeming Women till an hundred days after they are delivered. Which must be understood of those parts; for, for the Head-ach, and other Diseases of the Head and Breast, I have several times ordered Women newly delivered to be burnt, and with great success.

After Burning (that is, the first days after the first Burning) they touch the burnt part, often and softly, either with their finger, or rather with a clean Rag dipt in salt water, but lightly, for fear of a Fever; taking great care, that the Water be not over salt, nor their finger too cold or moist. Although this Monitory Rule hold not in all; yet it brings this advantage with it, when duly observed, that it draws the purulent matter out of the Brand sooner and safer.

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Mo. b. 5. §.
26. To these you may add (if you please) *Hippocrates* his Caution; It is more Mortal (at least more dangerous) to Burn the right hand Parts than the left.

But they that think much to take so great pains (for the *Japans* are true Haters of Labour) use other actual Cauteries, in the use whereof they follow not this exactness of rules; they therefore make a Roll a little longer than ones finger, but not quite out so thick, of the whole dry Leaves of Mugwort; with this long Tent they cautiously and lightly touch the place to be burnt eight or ten times, and at the last they set it fast on the Place. The *Japans* call this and the former Operation also, *Sinkiu*, the name and use whereof they took from the *Chinois*, among whom this latter (at this time at least) is not so usual: I prefer the common way of Burning with *Moxa* before this. For the right performance of which, according to the Laws of Art, Practitioners in *China*, and *Japan*, have their Schemes, in which, according to their small knowledge in Anatomy, they have marked the places in the whole Body designed for Burning: I should rather consult my Senses, and burn whereabouts the Arteries throb. Most of the *Japans* use this Chirurgical Pyrotechny once at least a year, usually twice or oftner, to prevent Diseases; in the same nature that our People use to Bleed and Purge, for Prevention sake, in the Spring especially, when the Humours are in a Ferment.

But the Physicians of *Japan* have a secret way of Burning, which they make use of in the most grievous and Chronical Diseases, as in Consumptions; and where Mens Bodies are weak and Bloudless: They call this *Siqua*, i. e. Burning of four places; they perform it with the well-known *Moxa*, namely in the Region of the Loins, near *Os sacrum*, where they set two Turrets, one on either side near the Spine; and two, one on either side, a little farther from the Spine. Hereby they hold, that strength is renewed, and that Vigour is acquired to the Genital Parts: Wherefore, I have often observed, how the Luxurious (as most of the *Japans* are) have Scars in these places. And perhaps burning in these places might doe good in that *English* Disease, called the *Rickets*. *Hippocrates* in the like case uses it; namely, when the Spinal Marrow is very much dried, when the Veins tending to the Marrow and access from the Head are stoppt; Burn him in four places on his Loins, on each side of the Vertebrae; and in fifteen places on each side his Back; and in two places on his neck among the Tendons: for if the Burning have success, you cure him: but this is a grievous Disease. But you may consult *Hippocrates* himself in what Diseases, and in what Places for each Disease Burning is proper; and you may doe that with *Moxa*, which he did with some far more violent Causticks, with others more gentle, and much of the same nature, as *Fungi*, and *rad Flax*.

L. de Affict.
intern. Scib.
14.

Now the Physicians in *China* and *Japan*, do distinguish the places that should be burnt (wherein the whole Art consists) in singular Figures, which they account the Rarities of their Art. And although the Vulgar do administer this Burning with *Moxa* to themselves; yet there are peculiar Surgeons among the *Japans* (whereof I am an eye-witness) that make it their business onely to perform this Operation and Acupuncture; they call them *Farys tensus*; their Shops may be known by their Carved Images (in which, the places to be Burnt are marked) as our Surgeons are by the Sign of the Pottingers. For it is of such moment to know exactly the Places to be Burnt, that it is become a peculiar Trade, in the same manner that our Oculists, Cutters for the Stone, and Rupture-Curers, appropriate each of them a peculiar Craft to themselves. And the manifold experience of Burning hath taught me, that much depends upon the distinct knowledge of Places: For the *Japans*, when they have lost their Stomach, burn a certain place on their Shoulders, to recover it; which the Skillfullest Anatomist in *Europe* can scarce give a reason of: They burn the *Os sacrum* and Loins in a *Gonorrhoea*, and in weakness of the Spermatick Parts: But which is more wonderful, I know a place in the Belly, not far from the Navel, which, if burnt, a certain Effemination follows, without any hope of recovering a Man's Virility. I knew a *Japanese* Matron, that now lives among the *Dutch*, who, upon her Faith, told me, That in her Infancy she had a Swelling arose in the Nape of her Neck, which, when the Physicians of *Japan* had tried to remove, by all sorts of means, they cut it off; but it grew again; till a certain old woman, looking upon the Excrecence, laughed at the preposterous endeavours of the Physicians, and applied *Moxa* to the middle of the sole of her Foot; whereupon the Swelling immediately withdrew it self from the Eyes of the Spectatours, and then utterly vanished, without any sign of Return to her old Age. What will you guess now, you *European* Dissector? Whoever desires to be informed in this knowledge of the Places, he must get some *China* or *Japan* Schemes; or if he dare not rely on them, let him observe that Rule of *Hippocrates*; Wheresoever you feel Pain, Burn it. Burn the Part affected, where the Artery beats violently, or not far from it: Do not lightly burn the Nerves, or the Nervous parts, if you can avoid it; rather chuse the Bloud-vessels (those genuine Habitacles of noxious Vapours:)

pours:) Which, notwithstanding, cannot always be observed; because the Vapour, that is the efficient cause of the Gout, commonly resides, and is as it were imprisoned in the Nervous Places. Burning cannot be administered to the Spinal Marrow without Danger. Besides, the *Japonois* either never at all, or very seldom (and then with great circumspection) burn the inner side of the Feet, or the upper part of the Arms, where the Nerves, Tendons and Ligaments, are covered with but little flesh; but the outer Parts of the Feet and Arms, in the Interstices of the Muscles, because there the Bloud-vessels (the Place and Course of Vapours) do lie. But he that pertinaciously doubts whether it make so much matter, where a Man be burnt; I will allow him the foresaid place in the *Hypogastrium* (a Fingers length below the Navel, right downwards upon the *Linea alba*) with the artificial way of Burning, as I hinted before, whereby a Man shall presently be effeminated, and made inept for generation: Wherefore through a preposterous election of places in burning, Patients receive more hurt than good. For the *Japonois* burn neither in the *Hypogastrium*, nor *Epigastrium*, but on each side, a little above and below the Navel; Burning a little above the Navel restores the lost Appetite; so burning the *Os sacrum* on each side, strengthens the genital Parts, diminishes, and sometimes stops the involuntary flux of Seed: The dimple of the Chin, or the middle furrow of the nether Jaw, burnt cures the Tooth-ach: So in *Scalpetus*, you have *Spigelius* his Invention, which advises in the Tooth-ach to cut the Branch of the Soporil Artery that runs behind the Ears to the Teeth, with a Penknife red hot: Various examples also of desired success have taught me the same thing. Besides, the *Japonois* do much commend burning in Dropsies, called the Tympany and *Ascitis*, as also in their endemious Cod-rupture (which is commonly the Swelling of one of their Testicles, very familiar among them) in which they burn the *Scrotum*, and the great Toe of both Feet above the Joint (which is a very sensible place, while it is burnt; but in the whole body there is none more sensible than that between the great Toe and the Toe next it.) And this production of the Vessels (on which this sympathy of Parts depends) must needs be wonderfull to our Countrymen, which is indeed unknown to the *Europeans*, but ratified by manifold experience to the *Chinois* and *Japonois*. Certainly the admirable derivations and divarications of the Bloud-vessels are not yet fully discovered by the *Europeans*; as may be demonstrated from their Schemes. In the violent pain of the Colick (such as rages horribly all *Asia* over, and often kills the Patient with unspeakable Torments, or frequently leaveth a Palsie in the hands and feet behind it) the *Portuguese* use this Remedy; they stand barefoot on a hot Iron (instead whereof I should use *Artemisial* Down, with less pain, and perhaps with more benefit) till the burnt part hiss, and they feel pain, upon which they presently find ease, otherwise they are counted incurable: But, Doth this argue that Wind is the efficient Cause of this Disease, or doth it confirm, the Cure of it should be by Fire? He that against the credit of his Senses doubts whether there be Wind, may be convinced by this Experiment in *Bengala*, where they know in this cruel Disease so to rub and press the Belly, till Wind does sensibly whistle out at the Navel; which, if it do not succeed, they set a great Pot (they call it *Cojang*) full of Water, which by the force and violence of the Wind moves and dances. And (by the way) in this same Disease our Soldiers in *Ceylon* use to take some Wood-ashes out of the Chimney, and mix them with Water and drink them, whereby they find present ease.

Therefore the *Chinois* (of whom the latter borrowed this Art, and whatever else they have in Physick) and the *Japonois* (who practise this Pyrotech-

nick Surgery more than the former) will have the place for burning most accurately observed; both which Nations, although in a manner wholly ignorant of Anatomy; yet they know the motion of the Bloud (on which they ground their whole Art of Physick) and the structure of the Bloud-vessels more exactly, than any Nation in *Europe*. Hence they have formed certain Rules upon burning of places according to the Complexion and disposition of the Humours, and the nature of the subjacent and neighbouring parts (as may be seen in their Schemes.) The burner marks the place with Ink, or some other colour, lest upon motion of the Body, and consequently of the Skin, he mistake: Or he keeps his Patient's Body steady in the same posture till he have done.

And for a Conclusion, let this preparation, and inward use of Mugwort serve; the *Japonois* take its green leaves, not dry, when they have taken out the stalks and fibres of the Leaves, and cast them away, they put the remainder in hot water, they stir it about and wash it, to separate the filth, and take off the bitterness, they pour away the water, and strain it all from the Leaves, these Leaves they pound in a Mortar, when it is enough, they put to it half as much boiled Rice, so with a little Sagar they reduce it to a Paste, and make Cakes of it; which their Women eat instead of Sweet-meats, for fits, suppression of the *Menses*, and Womens Diseases: for which Diseases, that Mugwort is a Specifick, Authours unanimously teach, and the practice of *Japan* doth confirm.

To this it may not be amiss to subjoyn Sir William Temple's experiment of *Moxa* on himself in a Fit of the Gout at the *Hague*. I set the *Moxa* (saith he) just upon the place where the first violence of my pain began, which was the Joint of the great Toe, and where the greatest anger and soreness still continued, notwithstanding the Swelling of my Foot, so that I had never yet in five days been able to stir it, but as it was lifted. Upon the first burning, I found the skin shrink all round the Place; and whether the greater pain of the fire had taken away the sense of a smaller or no, I could not tell; but I thought it less than it was: I burnt it the second time, and upon it observed the skin about it to shrink, and the Swelling to flat yet more than at first. I began to move my Toe, which I had not done before; but I found some remainders of Pain. I burnt it the third time, and observed still the same effects without, but a much greater within; for I stirred the Joint several times at ease; and growing bolder, I set my Foot to the ground without any Pain at all. After this I pursued the method prescribed by the Book, and the Authour's Son at *Utrecht*, and had a bruised Clove of Garlick laid to the place that was burnt, and covered with a large Plaster of *Diapalma*, to keep it fixed there; and when this was done, feeling no more pain, and treading still bolder and firmer upon it, I cut a Slipper to let in my Foot Swelled as it was, and walkt half a dozen turns about the Room, without any Pain or trouble, and much to the surprize of those that were about me, as well as to my own. For though I had reasoned my self before-hand into an opinion of the thing, yet I could not expect such an effect as I found, which seldom reaches to the degree that is promised by the prescribers of any Remedies, whereas this went beyond it, having been applied so late, and the prescription reaching onely to the first attack of the Pain, and before the Part begins to Swell.

For the Pain of the burning it self, the first time it is sharp, so that a Man may be allowed to complain: I resolved I would not, but that I would count to a certain number, as the best measure how long it lasted. I told Sixscore and four, as fast as I could; and when the fire of the *Moxa* was out, all Pain of Burning was over. The second time was not

not near so sharp as the first; and the third a great deal less than the second. The wound was not raw, as I expected, but looked onely scorched and black; and I had rather endure the whole trouble of the operation, than half a quarter of an hours pain in the degree I felt it the first whole night.

After 24 hours I had it opened, and found a great Blister drawn by the Garlick, which I used no more, but had the Blister cut, which run a good deal of water, but filled again by next night; and this continued for 13 days, with onely a Diapalma Plaster upon it; after which time the Blister dried up, and left a Sore about as big as a two pence, which healed, and went away in about a weeks time longer; but I continued to walk every day, and without the least return of Pain, the Swelling still growing less, though it were near six weeks before it was wholly gone. I favoured it all this while more than I needed, upon the common opinion, that walking too much might draw down the Humour; which I have since had reason to conclude a great mistake; and that if I had travelled as much as I could from the first day the Pain left me, the Swelling might have left me too in a much less time.

Sir William gives an account also how the Moxa removed the Pain in a Fit of the Gout, from Monsieur Serinehamps, the Duke of Lorrains Envoy then at the Hague.

Asthma, see Respiratio.

Atrophia, or want of Nourishment, or Leanness.

The Contents.

The general way of curing an Atrophy. I.

A particular one cured by Cupping. II.

The Cure of a Spasmodick Atrophy. III.

After Sinapisms Emplasticks should be used. IV.

Medicines.

I. AN Atrophy may be cured, 1. By repairing the general or particular defect of blood, and by using good nourishment, and in due quantity. 2. By correcting any fault in the blood by evacuations of all sorts, and by Alteratives. 3. By repairing the damage any particular part has sustained by mischance.

II. The Ancients had 3 sorts of Instruments to cup withall, of Glass, Brass and Horn; of which the 2 first draw by fire, the last without fire, onely by sucking with the Mouth: Which Horny Cupping-glass, although it be grown out of use among us; yet at this day, the Indians, that live under the Torrid Zone, have a value for it. A young Man that came from thence bestowed such a Cupping Instrument upon me, of which being resolved to make trial, I chose an Arme withered with an Atrophy, to which I applied my Cupping-glass, instead of Pitch and Rosin, which we read, how the eldest Antiquity made use of in the like necessity. Now these Cupping-glasses draw powerfully, and drawing the Skin curiously, they elevate the Veins and Arteries, through leanness fallen flat together: which being opened again, the blood and spirits pass to and fro: whose incessant Affluence, unless it daily supplied the place of those things that are continually spent by the Body, the Part so faulty would not onely not be nourished, but farther it would be emacrated of necessity. For this withering nothing is better than this Horny Cupping-glass: especially if dextrously applied, according to the course of the Veins and

Arteries, that carry life and nourishment thither. I made Experiment in the withered Arme of this young Man, we saw so much Heat and Blood drawn to the outer skin by its sucking, that the dry Arme was again nourished, and recovered its former firength. The way is this; when you have applied this Horny Cupping-glass to the Part, you must suck out the Air with your Mouth at the little hole, and then immediately close it with your finger.

III. A Boy of 11 years old, had from his infancy been troubled oftentimes with a cruel Head-ach for several days together. He was lean, pale-faced, and at length he fell into a perfect Atrophy, with Night-Sweats, and continual roaring, through violent pains of his left shoulder, tending towards his Heart, and the Hypochondrium, on the same side, sometimes pungent, by and by Contractive, or Spasmodick: He had also a desire to Cough, with shortness and difficulty of breathing, whereby the Contractions in his Shoulders and Breast seemed to increase; hereupon he was forced to sit upright in his bed, holding his Shoulder and left Hypochondrium always with his hand, by reason of the continual spasmodick pain. One of his Physicians blamed his Lungs, another his Spleen, most suspected a heftick Fever: At length being brought extreme low, he was successfully cured, with a distilled Water drawn off Chicken Broth, with some leaves of Germander, and Flowers of lesser Centaury (in which there lies an Antispasmodick Virtue, observed by few) and other things. Truly it were not difficult to derive the Rise and Causes of the foresaid Symptomes, according to Willis his Principles, from the enormities of the Animal Spirits and Nervous Juice, without the distempers of the Bowels serving for concoction; which have been blamed by all Men hitherto.

IV. If to draw nourishment to the part, Sinapisms be used, Emplasticks are good after them, left what comes for the use and strength of the Part, do transpire, as also after rubbings and anointings Comfrey Roots boiled in Spring-water is successfully applied to the Parts in form of a Cataplasim.

Medicines especially made use of by eminent Physicians.

1. Swines blood distilled is a singular thing to make one fat. Take of Swines blood 2 pounds, distill it in a Glass in Balneo. Give 2 ounces of this Water with a little Sugar every morning for 15 days.

2. A Water distilled off Swines blood, and cooling and moistning Plants does a wonderfull deal of good. It is made thus; Take of Swines blood 2 pounds, rub it between your hands, that all the Fibres may be taken away, add of the Leaves of Betony, Coltsfoot, Red-Roses, Mallows, each 1 handfull, Lettice 2 handfulls, Melon-seeds excocticated 1 ounce, Coltsfoot Water 2 pounds, Distill them in Balneo by an Alembick: Put to every pound of Water 3 ounces of Manus Christi perlate. Let him drink often of this Water.

3. In an Atrophy of the Limbs Nettle Juice is excellent to anoint the Limbs withall, that are extenuated.

4. The Virtue of this Liqueur is admirable; Take of Mentha Saracenic, Rosemary, small Sage, Flowers of Cheir, Lavender, Lily Convall, Roman Chamemil, Spike, of each equal parts. Bruise them, steep them for a Month in Spirit of Wine; strain them out very hard; keep it, and bathe the Limbs with it.

Aurium

Aurium affectus, or, Diseases of the Ears.

See Surditas.

The Contents.

Whether a Vomit, or a Purge be convenient, in pain of the Ears. I.

Whether Repellents should be applied. II.

Whether gentle Medicines must always be used. III.

Whether Faventinus his Onion be always proper. IV.

Violent Pain gives way to Purgatives, when it will not to outward applications. V.

Whether Vinegar and Oxyrrhodina may be used. VI.

Whether Narcoticks may be poured into the Ears. VII.

The Cure of an Imposthume when broken. VIII.

Things got into the Ear, are to be got out, and not to be left to Nature. IX.

How a Leech was got out of the Ear. X.

General Rules for Cure. XI.

Whether moist things may be used. XII.

How any Liquor may be drawn from the bottom of the Ear. XIII.

Spirituus Waters are to be preferred before Oils. XIV.

I. **W**Hether should we Vomit or Purge in pain of the Ears? A Vomit seems better according to Hippocrates, Aphor. 4. 18. Those pains above the Midriff, which stand in need of Evacuation, require a Vomit. And according to that Precept, lib. de loc. in hom. n. 55. Diseases are to be discharged by the part next to them, and to be drawn out by that part, that hath a passage nearest each of them. In lib. de affect. he expressly commends Vomit. If pain arise in the Ears, it is good to wash in much hot water, and to apply a Fomentation to the Ears, and if by these means the attenuated Phlegm depart from the Head, and the pain cease, these things are sufficient; But if not, a Vomitory Potion is the best Medicine. Where you must observe, that the seat of Phlegm, the cause of the Pain, is above, and so according to Hippocrates said Rules, must be discharged that way. But in his Book de locis in Homine, n. 20. He commends Purging, and condemns Vomiting. If by this means the Pain assuage not, let cooling things, actually cold, be poured in, and let a Potion be given that purges downwards, and not upwards, because a Vomit will do no good. But here you must note, that the Application of cooling things, in this case, argues, that some Hot Humour is in fault, the original seat whereof is below, and that Hippocrates, consonant to himself, purges therefore downwards. And do but you consider the Cause; you have their directions before you.

II. Whether should we apply Repellents? We must listen here to the determination of Aesculapius 9. ad Almansorem. Before Repercussion be made, let these things be observed, The Matter must not have been critically discharged; Not be venomous; Not furious; Not much; Not immediately discharged from the Brain; Not very tough and thick; Not gathered by little and little; Not run to the out-part of the Ear: Because all these things forbid the use of Repellents; besides, to repell to the Brain is very suspicious.

III. Whether must we always use gentle Medicines? The excellence of a most exquisitely sensible part, and its proximity to a principal part, seem to intimate so much: Wherefore Galen, 7. method. doth not cure sensible Parts at once with violent Medicines, but by mild ones by degrees. Yet he, in the violent pains of such parts uses strong Medicines,

lib. 3. 287. 7. as Chalcitis, Nitre, juice of Onions, Goats Urine, &c. that is, when cold and gross humours cause the Pain, which are attenuated and heated by the help of such Medicines, and the Vapours raised by them are dissipated. But he abstains from such things, when the pain is the product of inflammation.

IV. Many Practitioners use Ben. Victorius Faventinus his Plaster of Onions, to assuage the Pain of the Ears, of whatever cause they come, indifferently, to the great damage sometime of the Patient, especially when the Pain is but beginning, and depends on a hot Humour: But when the Pain is owing to a cold cause, or the Inflammation tends to Suppuration, the remedy must be applied with good success. Take an Onion roasted in hot Embers, of fresh Butter 2 drachms, Oil of Chamæmil, Roses, each 1 drachm, Saffron 1 scruple, apply it warm.

Zecchius, consulti. 62.

V. N. was afflicted with an unspeakable Pain in his right Ear, he got no sleep, and was scarce himself: the Humour indeed at first ran, but after the Surgeon applied a Plaster and Clothes to his Ear, the running stopt, but not the Pain. A Physician was called, and advised Opium, upon which he slept two hours, and when he waked, his Pain returned. At length, by my Advice, he took some Pills of Extractum Rudii, & Extractum Rhei, morning and evening four days one after another; he bore the working well, when I had removed the Plasters and Clothes, the Matter began to run plentifully. Then I gave him a gentle Purge of Powder of Jalap 1 scruple, sharpened with 5 grains of its Resin, and so the Patient recovered in three weeks. Another was troubled with a grievous pain in his Ears, his Head ached so, he could not sleep all night, scarce knowing what he did. I advised him to lay aside all externals (the former was my precedent) and presently to take these Pills; Take of Extract of Hellebor made with spirit of Wine, 1 scruple, Pill. Ruffi half a drachm, Resin of Jalap 6 grains, mix them, make Pills for 2 doses. The first Dose gave him four stools, with some alleviation of his Pain. The next day he took the second Dose: It gave him six stools: After Noon his Ear began to run, and when it had continued running fourteen days, the Patient was well. Another was tormented with so grievous a Pain in his right Ear for five or six days, that he was ready to make himself away: Many Topicks were applied without benefit: Three grains of Laudanum were given him every night, upon which he slept with some ease, the Pain returning when the Virtue of the Medicine was expired: After some days a Swelling arose behind the Ear, which being scarified, the Pain changed its proper seat, for it diverted from the Ear to the Loins, from thence to the Kidneys, and at length fixt in the left Knee: The Humour attenuated with Sudorifics, crept to the fleshy substance of the Ear, from the Ear it passed to the Throat; Then matter ran out of the Ear, attended with Swoonings and Death. Therefore any one may gather from the Cases here related, that in this Ail outward Application does more harm than good, and that it is safer to follow Nature's duct, and to purge what way she inclines, than by Topicks to fix that, which seems made for Volatility: Experience also testifies, that in such cases a Physician may do more in one day with internal Specifics, that discuss the matter, than with all Topical Repellents, which hinder the peccant matter, that, when it is disposed to run out, it cannot obtain its end.

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VI. Whether is Vinegar, and Oxyrrhodina to be avoided? Vinegar seems hurtfull, because, if according to Hippocrates, it cause very much Pain, it must needs offend the Ears, those Nervous and Bloudless parts, which are drier by far than the Womb. But Galen, 3. 287. 7. disallows not Vinegar mixt with oil of Roses. Moderate Inflammations (he saith) and such as do not heat, may be cured by some such means, as Vinegar and oil of Roses warmed, and well mixt. For Vinegar cools, repels, penetrates and strengthens, by which means

L. 3. Acat. 39.

means it defends the Part from vehement Inflammation. It is true, that by its acrimony it makes the Nervous parts smart, therefore it must not be poured into the Ears alone; but mixt with oil of Roses, and in a small quantity it becomes harmless; and so when its edge is taken off, and its piercing virtue made dull, it mitigates the Pain, and brings down the fierceness of the Cholerick Humour. Besides, Vinegar is not so cold as it is reckoned, when, as Galen confesseth, it consists of contrary faculties, for, by putrefaction it acquires some Heat; and therefore it is not so astringent, nor so cold, as either to prick the Nerves, or thicken and repel the Humours in the Ears.

VII. Galen adviseth Opium to be poured into the Ears; and Paul and others dissolve it in Milk: but if (quoth Avicenna) any hurt follow the use of Narcotics, give Castor alone after it. Concerning this matter Faventinus speaketh thus; And beware of Narcotick Medicines, lest by their stupefying Coldness they destroy the Instrument of Hearing. Nevertheless I would not neglect them, when I were certain, that the Patient would die of the pain, if we gave him not a Narcotick: But because the benefit in delivering the Patient from Death, is greater than the hurt he will receive from Deafness; for this reason we are allowed sometime to give them. Some use Toasted Opium; but if this be never so finely powdered, it will signify little to ease the Pain. Again, whatever is dropt into the Ear, cannot get beyond the Tympane, but if they penetrate not, they can never affect the inner Parts, that are so various, and at such distance: Opium also is peculiarly an Enemy to the Sense of Hearing.

Schneiderus.

Frid. Hoffmannus, m. p. 298.

VIII. Johnston commends the juice of Crow-foot for the breaking of an Imposthume in the Ear; but this should hardly be used, because it is strong and corrosive: But instead thereof we should use the juice of Houseleek with Woman's Milk.

IX. When any extraneous thing is got into the Ear, the business must not be wholly left to Nature; because many dangerous Symptomes use to arise from the Suppuration of these parts: For seeing the passage of the Ear is endued with a most exquisite sense, the Humours, by reason of the vehement pain, may easily flow thither, and so break the Drum, whereupon Deafness follows. Sometime the Bone also, that is covered but with a very thin Membrane, becomes carious after such Suppuration. And sometime after it a fleshy, or schirrous Fungus grows in the passage of the Ear. Therefore we must, with all diligence, get out whatever extraneous thing may come into the Ear.

X. When by chance a Leech had crept into the passage of a Man's Ear, Severinus poured some blood on the out-part of the Ear, whereby the Leech was enticed, and left the Caverns of the Ear.

Fabric. Hil. danus.

Hearnius.

XI. 1. Whatever Medicines are to be put into the Ears, they must be warm, not very hot; nor very cold; for, being void of blood, they easily incline to their natural temperament. 2. New Medicines must not be put in, till the Ear be very well cleansed from the filth of the former. 3. Three or four drops at a time are sufficient. 4. After the Medicine is dropt into the Ear, the Patient must lye on the contrary side. 5. What is put in must not be unctuous, nor viscid, for such things, when they are got into the windings of the Ear, cannot well be got out again, and therefore Spirituous and Distilled Medicines, that are used by way of Evaporation and Fume, are the most proper. 6. Young Surgeons should be admonished, that in curing Diseases of the Ears, they should rather gently drop in some convenient Liquors, than violently force them in by a Syringe, lest the Tympane be broke, and an incurable deafness do follow. 7. Topicks

Sennertus.

must not be applied till Universals have been used, especially if the Disease be grievous, and the body abound with bad juices. 8. We must have a care that the Medicine be not sharp; because the Passage of the Ear is very sensible.

Sculetus. Armam. Tab. 36. Fabric. Hil. dan. Cent. 3. Obs. 1. Idem.

XII. The Ancients abstained from moist things, and such as were cold especially. For Archigenes, when he was to use a Fomentation for the violent pain, uses live Sulphur mixt with Water. Let the Rubens in Spunges (saith he) be well wrung out, and applied to the Ears, for they are easily made loose and lax by moisture. Therefore in Galen Vinegar is often mixt with Medicines for the Ears, at least while they are boiling, not so much for the sake of penetration, but that they may dry the more. But Avicenna saith, Enchirid. Med. pract. 3. When we fear the pain will cause Convulsion, we cannot excuse our selves from the use of Mollifiers. But to cause Suppuration, we must not in the Ears use very moist things, as in Abscesses of other parts; because the cold and dry temperament of the Ear must be preserved.

XIII. You may draw any Liquor, or Matter from the bottom of the Ear, if you dip a Sponge in Betony Water, and strain it out well again, and then put it in the passage of the Ear; and let the Patient lye on his sick side; for so the Sponge will soak up whatever is liquid; but the Sponge must be often changed and washed.

Fabric. Hil. dan.

XIV. A Melancholick Person of about Fifty years of Age, was troubled for some weeks with a grievous tingling in his Ears, and was cured in a few days with a few drops of Spir. cephal. Anhalt. put into them with a little Cotton. I have found the effect of it in strengthening the Brain, and dissolving a Vaporious and flatulent Matter, far beyond distilled Oils, which, by their exceeding heat, doe more hurt.

Thonerus. lib. 2. Obs. ult.

Medicines especially made use of by eminent Physicians.

1. Pound some Galls, bind them in a Rag, boil them in Wine, and pour in some of the Wine hot; it gives present ease. Bayrus, 1. 4. c. 1.
2. I cured one who had a sore Ear 8 years, so that all that time some purulent Matter ran out of the Ear, onely with Unguentum Egyptiacum. J. Wallaus. Med. pr. 2. c. 8.
3. One that had an Imposthume in his Ear, put into it Oil of bitter Almonds, mixt with Mucilage of Linseed; whereupon Matter ran out in great quantity, and so he recovered. Forest. lib. 7. c. 8.
4. Marcellus his Experiment is not to be despised; Mix, saith he, two ounces of Cows Milk with one ounce of Honey, pour some of it in presently, stop the Ear with Wool, and although the Ulcer were Cancrous, it will wonderfully heal. J. Riolan. medic. m. p. m. 135.
5. An excellent old Medicine for the Tingling of the Ears; Take of white Hellebore, Castor, each 2 drachms, Costus 1 drachm and a half, Rue 2 scruples, bitter Almonds 1 ounce, Euphorbium half a drachm; boil them all for an hour on a gentle fire, strain it, and drop it warm into the Ears. Grato. conf. 44.
6. Nitre dissolved in strong Vinegar, and often dropped into the Ears, quickly cures any noise in them. P. J. Fabr. 1. 3. c. 34.
7. The steam of Vinegar with the Gall of an Ox, and the Gall of a Goat with juice of Onion, are found good by Experience for a Noise in the Ears. Sennertus.
8. Worms will fall out by this means; Mix Henbane-seeds with a little Wax, cast it on burning Coals, and let the Patient, by a Funnel, receive the

Arnoldus Villanovan. 1. 1. c. 35.

the Fume into his Ear: Hold a Bason of Water underneath, and you will certainly see the Worms fall into the Water.

Bayrus. l. 4. c. 5. 9. Juice of Shepherds Rod, and Pellitory of the Wall, with a little Black Hellebore presently kills the Worms.

10. *Arculanus in lib. 9. Rhafis*, saith thus; This is a tried Remedy to draw out any thing that is got into the Ears; let a live Lizard, or one but

newly dead, be applied with his head to the Ear, and bound there for three hours, you will find the thing, whatever it be, sticking to the Lizard's head, when you remove it; and this is good to draw out any thing else.

11. A little Ball of Dogs Hair put into the Ear, is good to draw a Flea out of the Ear; for the Flea will presently creep into the Hair, out of Sympathy which it hath with Dogs.

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A GUIDE TO The Practical Physician.

BOOK II.

Of Diseases beginning with the Letter B.

Balbuties, or Stuttering.

The Contents.

Stutterers must have their excessive moisture purged cautiously. I.

All do not falter because of the excessive moisture of their Brain. II.

A Medicine.

I. **S**OME Stutterers have their Tongue weakened through the moist intemperature of the whole body, or of the Brain. And they that have a moist Tongue are for the most part loose, the same Membrane being a coat both to the Stomach and to the Tongue. For this reason, when the Tongue trips, it portends a *Diarrhoea*: as if Hippocrates had said, *Such bodies should be purged with caution, lest they be cast into a Looseness.*

II. The disaffection of Lispers consists in Conformation, and not at all in Intemperature: for in the middle region of the Palate, i.e. in the fourth bone of the upper Jaw, in all persons that I have hitherto seen, who could not pronounce the Letter R, there are two holes, which are nothing so open and obvious, as in them that do not Lisp. Therefore those two passages are the immediate Cause, and the Disease will be in Conformation.

¶ In like manner we observe the holes near the Teeth (yet by all such so brought into the World with themselves) to be greater, through which the Phlegm trickling and moistening the tip of the Tongue causeth faltering, whereupon Men become Stammerers, and half-Tongued. Nor therefore must we say, that Men are Stammerers by reason of a Phlegmatick Head, or a moist Intemperature of Brain: For there is no Intemperature so dry, but so much

Phlegm may be gathered, as falling on that part may moisten the Tongue, and make Men Stammer. Sanctorius, Meth. lib. 3. cap. 9.

A Medicine especially made use of by an eminent Physician.

Let the Mouth be often washed with Spirit of Black Cherries; for it greatly strengthens the Muscle of the Tongue, and the innate fixt Spirits of those Parts allotted to Speech. Pet. Joh. Faber. univ. sapientie, l. 3. c. 14.

Brachiorum affectus, or Diseases of the Arms.

The Contents.

Pain of the Arm cured with an easie Medicine. I.
Its Swelling cured, which came upon letting an impure Body bleed. II.

The Cure of it shrunk. III.
Medicines.

I. **A** Goldsmith, who was Scorbutick, was troubled with a violent cutting Pain in his right Arm, so that he could neither eat nor sleep. I prescribed divers things to no purpose, at last the following Bag took the Pain quite away. Take of Grommel not excorticated 3 handfulls, of common Salt one handfull, of Chamæmil Flowers and Wormwood each 1 handfull, of Bran 2 handfulls; heat them upon a Tile, put them in a Bag, and apply them hot. Ger. Christ. Wincklerus, Misc. curios. an. 96. obs. 94.

II. A

Hearnus, comm. in aphor. 32. Sect. 6.

II. A Man above Fifty years old, who was cacochymick, and subject to great obstructions in his Bowels, had, without either Purging his Body, or advising with a Physician, and when he had no occasion to bleed, got himself let blood in the Cephalick of the right Arm, the next day he had some small pain about the place of incision, which gradually encreasing, and growing more violent, a great afflux of serous Humours did follow. When I was called, I found his whole Arm incredibly swelled, from his shoulder to his fingers ends; there was an Inflammation with Pustules, as in a pustulous Ring-worm, out of which a serous and sharp Humour ran in abundance; he was restless, his stomach and strength were gone, he was in a Fever, and in much pain, and that not without fear of a Gangrene. Notwithstanding I undertook the Cure in this manner; When I had put him in a right course of Diet, I gave him a stool (for he was constive) with a Suppository: After Supper I gave him a little Laudanum, with Cinnamon Water, and *Confectio Alkermes*: The day following I gave him an Infusion of Rhubarb, Agarick and Senna, with a few drachms of *Elect. Diacarth.* But that Potion scarce wrought at all; the next day therefore I gave him a drachm of *Pil. Coch. & de Hermodactyl.* with a few grains of Trochiscs of *Albandal & Diagrydium*: I applied to his Arm things to assuage the Pain, maintain the native heat, consume excrementitious Humours, and to resist Putrefaction: Then I made use of an opening Apozeme for several days, and when at set times I had purged him with our lenitive Phlegmagogue, and with Hydrogogues, he was perfectly restored. Hence it appears, how dangerous it is to move any thing in bodies that are impure and full of ill Humours: Wherefore *Galen* was in the right, that Wounds should be judged dangerous, not onely for the Excellence of the Part affected, or for their greatness; but for the impurity and cacochymy of the Patient: for we often see most grievous and deadly Diseases do arise from the least wound, nay, from a little worm; while the Humours flow from the whole body to the part that is hurt, as to their common sink, and so destroy the innate heat of that part, and excite various symptoms.

Fabricius
Hildanus,
Cent. 4. Obs.
71.

III. A Person of Quality about five and forty years old had his Arm shrunk; He took an Extract of *Grana Acanthalidis*, and Pulp of *Coloquintida* for fifteen days, by means whereof the Humours that were gathered there, were dissolved and expelled; In the mean time the part was outwardly fomented with this Decoction; Take of Mallows, Violets, Calamint, Chamæmil, Melilot, each 1 handfull; Let them be boiled with a Neats-foot in Water and Wine.

P. Poterius,
Cent. 1. curat.
79.

Medicines especially made use of by eminent Physicians.

1. A certain person, when he had anointed his Arm that ached, with the Juice of the Root of Devil's-bit, was presently eased of his pain. ¶ Some who have had violent pain in their *Periosteum*, especially at night, have reaped much benefit from the Oil of Earth-worms, and of a Fox. You may first apply *Aqua Vite*, after that Fox Oil alone, and last of all you may anoint with Dogs-grease as hot as you can by the fire.

Pet. Forest.
l. 29. obs. 28.

2. I have often experienced this Plaster to doe a great deal of good; Take of pure Gummi *Caranna* 1 ounce and an half, of *Tacamabac* 3 ounces, of *Ammoniac* and *Galbanum* dissolved in Vinegar, each half an ounce; *Bdellium* 6 drachms, yellow Amber 1 ounce, Mastick, Frankincense, each half an ounce; Turpentine and Wax each what is sufficient. Spread it on Leather, and apply it to the part grieved. It must be used for three weeks or a month.

Balthaf. T.
maus, Ep.
Med. l. 3.
Ep. 19.

Bronchocele, or the Throat-Rupture.

The Contents.

It hath not one onely Cause, nor Cure. I.
One ceasing, when the Swelling broke of it self. II.
By Application of an actual Cautey. III.
Caution must be used in cutting of it out. IV.
If Medicines prove ineffectual, we must have recourse to Incision, or a Seton. V.
Medicines. (See Strumæ.)

I. *Celsus* defines *Bronchocele* to be, A Swelling in the neck, betwixt the skin and the *Aspera Arteria*, wherein sometimes dull flesh, sometimes some Humour like Water or Honey is contained. *Platerus* makes the cause to be Wind breaking in under the skin, and the general Membrane under, and adhering to the skin, in the forepart of the neck: But the cause of that Aërial Collection he makes to be the loosening or separation of the skin with its Membrane (which is thicker and redder in that place than elsewhere) from the seat of the *Aspera Arteria*, and fore-Muscles of the Neck, into which space, when made, the Air or Wind, to avoid a vacuum, breaks in, and not onely by filling it raises the skin and Membrane into a Tumour, but by continuance distending it, much encreaseth it, whence it is rightly called *Bronchocele*, as if it were a Rupture of the Throat: And he makes the cause of the separation of the Membranes to be violent straining, either in going to stool, or in labour in Women. There is truth in both opinions, although *Sennertus* thinks it scarce probable, that Wind alone can procure so lasting an evil. ¶ I saw an example of the first kind, Anno 1660. in my own Maid, *Petronella Definod*, a faithfull servant, who died of a Consumption and Dropsie in her Brest and Belly: In the process of her Disease she had a huge Throat-Rupture, which had disfigured her Neck for ten years: I ordered the Swelling to be opened with a Razor; there was underneath glandulous flesh, swimming in great store of purulent Matter, which had flowed thither from the Brest and Lungs. ¶ I had an example of the latter kind in a noble Matron, who, upon her straining in Travel, and holding her Breath, contracted that Ail on a sudden: She went with it two years, but at length it dispersed of it self, without any Medicines or remainder of it behind. ¶ That driers may properly be prescribed for this Disease, the example of a Small-coal-man in Geneva doth shew, whose Neck was beset with one of these Swellings as big as his head: but by his continual stirring in, and carrying of Coals, and by inspiration of the Dust, he obtained a perfect Cure; and, at this very time, his Dewlaps hang at his Neck, as upon an Ox. *Arnoldus de Villa nova* his Powder is very Efficacious, and deserves commendation, while the Disease is new; Take of Sea-Sponge, *Pila marina*, Pepper long and black, Ginger, Cinnamon, *Sal Gem*, Pellitory of Spain, Galls, Sponges, *Bedegar*, each 1 drachm, pound them all together, except the Sea Sponge, which must be burnt, and its ashes mixt with the rest, and sieced; let him hold a little of this frequently in his mouth, both night and day, he may take a little of it often in a day. ¶ Amongst topical Medicines this of *Ætius* discuffeth, which hath, Of Quick-lime, Gum-Ammoniac, *Bdellium*, Shells burnt in an Oven, Verdigrisee, live Sulphur, each alike quantities, mix them up with Vinegar, and then make them up with Sewet, or Turpentine, and apply it. ¶ Also *Unguentum Valesii* is good; Take of Euphorbium 1 ounce, Sulphur, Sandarach, each half an ounce, Wax and Oil as much as is sufficient. Make it into an Unguent, with which anoint the Neck, and apply the Plaster above prescribed: For (saith he) in good ones of a years standing, we wrought by way of Resolution, as we said but

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now,

now, and thereby we had honour, and obtained benefit.

II. One called Blandin had his neck wonderfully swelled with the Throat-Rupture; upon it there grew a painfull Tubercle, which being brought to Suppuration by Steven Dentand, a skilfull Surgeon of Geneva, and it running good matter for several days, the Swelling wholly fell, without a Relapse.

III. A Collier importunately dunned a Smith as he was turning a hot sharp Iron on his Anvil, for Money for a sack of Coals which he had bought of him. The Smith being earnest at his work, after several threatnings, if he gave him any farther disturbance, told him, he would run his Iron into his swollen Throat. Notwithstanding the Collier urges him, whereupon the Smith enraged, runs the red-hot Iron through his Swelling. The Collier drops, and the Smith secures himself by his heels; but the Collier being carefully looked after, recovered both of his Burning and Swelling.

IV. We may question whether the matter of the Throat-Rupture be contained between the broad Muscle and the skin, or lye hid under the broad Muscle; for the matter gathered here cannot be got out, because insinuated into the Spaces of the Muscles: If it lye without, it may be cured and rooted out: It uses to begin from Wind, that distends and separates the skin from the fleshy Membrane, or the broad Muscle it self is separated from the parts under it.

V. But if the Disease will not give way to Medicines (among which *Ætius* commends *Edellium* mixt with Honey; and Quick-lime mixt with Hog's Lard; Goat's dung dissolved in Vinegar; Ly well mixt with Honey, &c.) by *Rogerus* his Counsel, two Setons are to be applied, that the Humour may by degrees run out, and what remains, must, by little and little be consumed with eroding Medicines, as with Powder of Affodils, and the like. In fine, if it be not implicated with the Veins, Arteries and Nerves, it must, with its Bladder, be taken out by Incision, as we have said of the Glands, and as we have done three or four times. ¶ But if it is not cured by these things, nor dissolved, then we must come to putrefactive and eating Medicines: For, as *Galen* saith, *14. Artis parvæ*. The Cure of the Throat-Rupture is performed either by dissolvers, putrefiers, or by Surgery, namely the Knife. And it is said there, that because Putrefiers and Corrosives are a long time in working, are troublesome to the parts, and especially torment the weak; Therefore it is good to cut them as far as the skin, and (if it can be done) to draw them out bag and all, and if any of the Bag remain, then to apply Corrosives (*Butter of Antimony* is excellent for this purpose) and Putrefiers, afterwards Mundifiers, Sarcoticks, and things to heal the Wound must be applied: But the skin, with the adjoining Coat, is eaten away by Causticks, which being done, if it be an Humour it runs out, if any thing thicker, it is drawn out with the fingers, then the Sore is healed with Lintments. ¶ But this Cure is half Chirurgical, and threatens danger of a *Fistula*. But the Cure which is performed by Surgery, by drawing out the Matter contained in the Tumour by Incision, is shorter, but more difficult, and rarely hath a good issue: But *Rogerus* bids two Setons be made with a red hot Iron, one length-way of the Swelling, the other a cross, and that they be removed twice a day, till all the Matter be got out. But this seems rather to have place (according to *Valescus*) when some Warrish Matter is contained in a Bag, or some other Phlegmatick Matter which can run. ¶ I saw, Anno 1663. a Throat-Rupture, which threatned Suffocation by its bulk, through compression, and straitning the Wind-pipe of Captain *Rolin's* Wife, a *Newenburger*, diminished by help of a Seton, which I advised to be made in the lower part of her Swelling.

Bubo, or a Swelling of the Glands in the Groin or Armpit.

The Contents.

Digesters should be strong. I.
Maturation better than Digestion. II.
The way of curing a pestilent one. III.
Mercurial Ointment is dangerous. IV.
Dispersing or opening is not necessary in every one. V.
A safe Method of Cure. VI.
In a Venereal one, whether, and what Vein should be brea-
thed. VII.
It must be cured by Suppuration, and not by Dispersing. VIII.
It must be opened in time. IX.
Emplastrum de Vigo cum Mercurio is hurtfull. X.
Defensatives must be made use of about a malignant one. XI.
How a simple one may be distinguished from one malignant. XII.
Medicines.

I. WE must observe, that what Digesters we use, must be stronger than in other Inflammations, seeing the Glands are colder, and more ignoble parts, and have no exquisite sense.

II. If the Tumour digest not, it must be turned into Pus, and the Bubo must be ripened; which is generally the safest way: For except this be done, as I have often observed, after a little time a new Bubo usually rises, either in the same, or in some other part.

III. The Physicians of Zurich in Switzerland published a Book of the Plague, wherein they propose a way to cure a pestilent Bubo never till then in use, viz. to take up the skin under the Bubo with a pair of Nippers, or with ones fingers, run a red hot Needle through it, and put some root of black Hellebore in the hole. I had rather make the hole with a good cutting Needle, than with one red hot.

IV. There are some that anoint their Body with Ointment of Quicksilver, not knowing, that it being cold and moist, must drive back calamitous infection of the Venome with the Humours, and bring death to the infected Inwards, as I have observed hath happened in several. *Sigonius*, D. M. using this Remedy for himself, to digest a pestilent Bubo in his Groin, presently perceived his strength to fail, and shortly, as his Bubo disappeared, he died.

V. Some pestilent Buboes, when they would yield to no Remedies, at last we left them to Nature, especially seeing they created the Patients no trouble in their walking, nor pain, nor indangered life. Nor indeed do I think it necessary to open all such Tumours, seeing Nature, in a long tract of time, can best digest them: When, on the contrary, the hazard of an incurable Ulcer may be run by unseasonable and violent opening: Yet these things should be managed with great judgment, as the nature of the thing shall require.

VI. Pestilential Buboes should, if possible, be discussed, and if they cannot be discussed, they must be brought to ripening and suppuration. Now the cure is to be performed by the same Medicines, wherewith the Swellings of the conglobated Glands are usually cured, always with respect to the pestilent poison, for whose sake Treacle, Mithridate and the like, which are good for it, ought ever to be added to other things. To this purpose distilled Oil of Hartshorn, and other things, consisting of a volatile oily Salt, may be mixt with common Medicines. I have observed that *Unguentum Martiatum* mixt with Treacle, is excellent for dispersing, and that *Emplast. Diachyl. cum Gummi*, promotes Suppuration. Unless the violence of the Pain be urgent, I would not precipitately use Scarification of the Buboes, much less Blistering and Cupping: But when the Buboes are great and burning, and the Patients strength firm, I could allow Cupping and Scarifying, but never Blistering,

Riolanus,
Enchir. p.
304.

Chalmers,
p. m. 119.

Valescus.

Forest. Obs.
Chirurg. l. 3.
Obs. ult.

Hildanus;
cent. 6. obs.
30.

Palmarius,
de feb. pe-
stil. c. 24.

Greg. Horst.
us, obs. 33.
l. 7.

Blistering, from which I could never yet apprehend what good could be expected, or did ever follow: For the pain which is then increased, together with the great heat, and a kind of *Erysipelas*, can doe the Patients no good, who are already sufficiently weakened with the violence of the Disease. But by gentle Medicines, outwardly applied, the sharpness of the Humour is qualified, when there is any in the *Buboes*, the Cure at least is promoted by degrees, if so be that things convenient inwardly be not neglected, by which the Discussion, as well as Suppuration of the *Buboes* may not a little be promoted: As soon as the *Buboes* are suppured, the opening of them must be hastened, either with a Penknife, or some breaking Medicine, though I prefer a Penknife; after the *Bubo* was opened, I have put in, with good success, *Balsamus Sulphuris Terebinthinatus & Anisatus*, with Unguent. *Basilicon*, and Treacle: for by this means I quickly cleansed the Ulcer: Moreover, by means of this same Balsam it heals up more happily and quickly, if you apply but a little *Emplastrum Diapompholig*, or some such like to hasten the Cicatrice. ¶ I use to treat a Pestilential *Bubo* in the manner following; At the very first I clap on a Vescicatory, although the Tumour be of no considerable bigness, and neglect Cupping-glasses, which I therefore reject, because they cause pain and a Fever, draw out the good Humours as well as the bad, and do yet alter the whole blood more: Within 7 or 8 hours I cut the Blister, and apply *Emplastrum magneticum arsenicale*: Certainly its virtue is such in this case, that I know not a more noble Medicine, as will appear to any one that uses it: The Description of it is in *Hartman*. I have experienced these good qualities in it, that if it be applied to a hard skin, it produces not the least Eschar, and in the mean time draws out the Malignant Humours so egregiously, that a *Bubo*, as big as a Walnut, is taken away in four or five days time: But this does not always succeed so quickly, and this is the reason why a Blister must be first drawn, that the Humours may the sooner be evacuated. Nay, in robust Bodies it will produce no Eschar, unless by help of a Vescicatory, not onely the Cuticle, but some part of the skin also be first corroded: But in children, and more tender bodies, it is able to raise a Scab of it self, without any blistering premised. This Scab is the true seat of the extracted Poison, wherefore it is found pretty thick, and the skin onely superficially corroded, which is a thing truly worth consideration: For this, as I think, is the reason, why this is sooner separated than any other Scabs raised by Art; for in 24 or 36 hours it hath fallen off, by the help onely of a *Spatula*, without any precedent Scarification. It may be taken away without any, or but a very little pain, if to your Antipestilential Plaster, whatever you use, you add a little Unguent. *Basilic*. or Treacle. Otherwise this Unguent excellently promotes the falling of the Eschar. Take of Virgin Honey, Ducks grease, each 1 ounce, Soot 6 drachms, Stratsburg Turpentine 1 ounce, Yolks of Eggs No ij. Treacle 3 drachms, Oil of Scorpions what is sufficient. Mix them and make an Unguent. But if when the first Scab is fallen, the Tumour be not sufficiently abated, you may raise a second and a third with *Emplastrum Magneticum Arsenicale*, and then proceed as you did before. You may heal up the Ulcer with *Emplastrum de Minio*, or some other drying and cicatrizing Plaster; but do not make too much haste to heal it, lest the Poisonous Humour still remaining in the Body should cause a new Disease, or Death at last.

Franc. Sylvius de le Boë, Appen. ad Prax. Traët. 2. Sect. 677.

Barbette, Traët. de Pe. ste. p. m. 191.

VII. If there be a Venereal *Bubo* in the groin, you must not bleed in the Arm; For there would be danger, lest the morbidick matter should be drawn upwards. I have known some, who just upon the appearing of the *Bubo*, after letting of blood and Purging, have fallen into a stubborn Pox, if not perpetual. But if the *Bubo* give no hope of Suppuration,

and several days have past, and the Pain and Swelling do not encrease, then you may safely let blood below; for the matter is drawn downwards, and by the approach of hotter blood to the *Bubo*, sometimes it is easily suppured. But when you have used Suppurators a long time, if the thing succeed not according to your desire, then you may freely breathe a Vein in the Arm.

VIII. In the same, since the Humours want violence of motion, there is no necessity of Revulsion, but it is rather better to draw all the Humour to the place affected; as in pestilential ones, that all the force of the poison may expire by the *Bubo*: for when it is otherwise, more grievous Symptoms and Diseases spring up. Which is the reason that I have always perswaded my self, they are in a grievous error who try to dissolve them; for although it be a safer way of evacuation, yet in this case it is the cause of much mischief; seeing, in dissolving them, that matter onely vanisheth, which is contained within the *Bubo*. Whence it comes to pass, when nothing of the peccant matter in the whole body, and especially in the parts about the Liver, and in the Liver it self, is diminished (as is usual in suppured *Buboes*, by which the matter of the whole body runs out, and is purged away, so that then the Body is more purified) that the matter left within causeth falling of the hair, Pustules, Sore heads, and grievous Pains. For which reason I reckon it most advisable to endeavour suppuration in all these, as a present remedy for this worst of Diseases.

IX. *Buboes* that are caused by thick, tough and cold Humours, are ripened with difficulty, and require a long time to cure: For sometimes when Nature is not strong enough to drive such matter to the outer skin, it remains between the *Peritonæum* and the Muscles, hence it continually sends Vapours to the Liver, sometimes it causes large *Sinus's*, and divers symptoms, for the matter polluted with this Infection returns to the Liver, and infects the mass of Blood, and other parts. ¶ A certain person had a *Bubo* in his right groin, who deferred opening of it, till the malignant matter fell upon the fourth and biggest Nerve of all that move the Hip; whereupon there was violent and continual pain in the Hip, attended with Convulsions, a continual Fever, &c. after that there was great Leanness and Weakness. Many things both inward and outward were tried, but in vain; for the *Bubo* did scarce appear outwardly, onely the Groin was hard; there was no pain almost; for the violence of that in the Hip had stunned it. At last the *Bubo* was broken by help of a Caustick, out of which, in six or seven days time, there ran above Ten pounds of Matter: And he difficultly escaped by help of the *Pep-per Bath*.

X. They that use *Emplastrum de Ranis cum Mercurio*, are most impudent and audacious Asses in this Art, for they drive the Venome inwards, and greatly endanger their Patient, as both Writers and Experience do clearly inform us.

XI. If there be suspicion of a Malignant *Bubo* from its green colour, or blackness and inflammation, such as come of Melancholy turn'd into black, thick and rebellious choler, so that from its more plentiful influx into the part, there be danger of a Gangrene and Mortification; then the places round about the Abscess must be defended with Repellers, but the Abscess it self not at all.

XII. *Buboes*, as they rise from blood, stagnating in the conglobated Glands, and tending to Inflammation, so as a saline or acid Acrimony is joyned with the blood, they shew their peculiar malignity. From Phlegm joyned with the blood *Buboes* rise more Oedematous; from common Bile, more like an *Erysipelas*; but from an austere humour more hard and schirrous: from a corroding Acrimony malignant ones;

Epiphanius Ferdinandus Histor. 17.

Mercatus, de indicat. Med. l. 1. c. 4.

Hildanus, cent. 5. obs. 65.

Barbette, Traët. de pe. ste.

Parvus, l. 21. c. 31.

ones; which Acrimony notwithstanding is often allayed, both by the blood it self, and by Phlegm mixt with it; wherefore the malignity and Acrimony can seldom be deduced from the *Buboes* alone, but from other Symptomes usually accompanying them, and in the Plague indeed from Carbuncles and black Spots; but in the Pox, from the *Gonorrhoea*, cancrus Ulcers of the Genitals, &c. Therefore *Buboes* alone, since they never are the diagnostick signs of a Pox alone, neither from them alone can its Essence be derived, but from other Symptomes accompanying them. Except some will have Venereal *Buboes* not to be extended length-ways the thigh, but athwart, and that they resemble the Site of the Spermatick Vessels, as some do teach, in which thing notwithstanding I think they pronounce more out of prejudice, than from accurate observation, while they imagine that different Glands are affected in the Plague, and in the Pox: except may be it happen, that seeing there are many Glands about the Groin, in the Pox those especially be affected, that are nearer the Spermatick Vessels, whether the *Preparantia*, or the *Deferentia* are: Afterwards the Poison rises through them, and insinuates it self partly into the whole mass of blood, and partly into the parts adjoining, and so into the Glands themselves, and infects them.

Sylvius, App.
pend. ad
Prax. m.
Traç. 3. Sect.
23.

Medicines especially made use of by eminent Physicians.

Joh. Agricola
la commen-
tar. in Pop-
pium.
tr. de Sul-
phur. p. m.
410.
Ger. Blafii
Med. uni-
vers. thera-
peut. special.
de bubone,
Sect. 1. c. 3.
S. bast. Cor-
tilio, l. 1. c.
5.
Col. Fabri-
cius, obs.
clin. cent. 6.
obs. 98.

Fr. Oswaldi
Grem. ar-
bor. integr.
de ruines ho-
minis. l. 1. c.
7.

Sam. Hafen-
reiter, nosed.
de cur. ef-
fect. l. 2. c.
10.

Balkhal. Ti-
mus, cas.
Med. l. 5.
cas. 5.

Joh. Vigi-
lius, Med.
chr. l. 1. c.
57.

1. Balsam of Sulphur is an excellent Remedy for *Buboes*.
2. Emplastr. dia Sulphur. Rulandi, is highly commend- ed for promoting of Suppuration.
3. In a cold *Bubo* I use this Plaster among my Se- crets; Take of Linfeed Meal 2 pounds, of old Cheese mashed 1 pound, mix them, let them boil in a suffi- cient quantity of the Decoction of the bones of an Hog's Legs, make a Plaster and apply it.
4. I have often found the benefit of a Vescatory of *Cantharides* in a pestilential *Bubo*, for it draws the Poison to the out-parts. Take of Sowre Leven 1 ounce, *Cantharides* finely powdered No xx. Treacle, Mithridate, each 1 scruple. Mix them, make a Cataplasm, and apply it four or five inches be- low the *Bubo*.
5. If a Sapphire be leisurely drawn round a pe- stilential *Bubo*, drawing it round against the Sun or the Light, then there will be a black Circle, by which the Poison exhales forth. And they use to bind it on, and draw it about for half a quarter of an hour, then it suffers not the Poison to spread beyond the Circle, but it grows black round it, and being dried to an Eschar it will fall off.
6. A certain Physician applied this thing follow- ing with great success to get out the Poison. Take of *Diachyl. compos.* 1 ounce and an half, of roasted Oni- ons, roasted Garlick, each 2 ounces; Figs, No xx. Le- ven, Mustard-seed, each half an ounce, root of Mal- low, Marsh-mallow each 1 ounce, *Galbanum*, Gummi Ammoniack dissolved in Vinegar, each 3 drachms, Ointment of Marsh-mallows 1 ounce and an half. Mix them.
7. They easily dissolve and vanish away, either of themselves, or by anointing with a Man's fasting spittle, or oil of Scorpions.
8. In a Malignant *Bubo* we must apply *Diachylum cum gummi*, and black Sope, whereby I have seen most stubborn *Buboes* suppured.

Bubonocèle, or Groin Rupture.

The Contents.

- One impatient of a Groin-Rupture, taking it for a Venereal one. I.
The Gut must be put up betime. II.
A mortal one. III.
Whether a Maid cured of a Rupture, if she Marry, will prove barren? IV.
Medicines. (See Hernia.)

I. A Country Man labouring under a Groin- Rupture, went to a Barber-Surgeon, who taking it for a Venereal *Bubo*, perswaded him to have it opened, which the poor wretch consented to, and when the Excrements came out, he presently fell in a Swoon: I being called, presently put the Gut back with my finger, having applied the White of an Egg with Dragons-blood, and then making some compression with a Linnen-cloth four double, I bound it pretty strait for four days, then I used A- quapendents Cerecloth for the Rupture; and the cut parts grew together in ten days.

Marchetti,
Observat. 55.

II. A Matron Forty years old, subject to a Rup- ture for several years, when the Gut had slipped into the cavity of the Groin, which it had made, and she did not presently put it back, began to be pain- ed, afterwards she Vomited, and went not to stool; all this while concealing the cause, that is, falling out of the Gut, at last she brought up her Excre- ments at her Mouth. I being called the Sixteenth day of her Disease, and inquiring the cause, found a hard and painfull Swelling, as big as ones Fist, in her right Groin. I foretold the Disease would be mortal, because some part of the Gut was cor- rupted. It's true, by the help of Fomentations the Gut was put back, and much Excrements discharg- ed, and also a piece of the half rotten Intestine, about a finger long, whereupon the Patient found ease; yet the next day, which was the Nineteenth of her Disease, she died. The Cure might have been easie, if the cause of her Disease had been known to her Physician at first; but her imprudent Modesty was the cause of her Death. Except this woman, it was never my hap to know another die of a Rupture: for the part affected in Women does not easily ad- mit any large Dilatation, or Sinus to be made by the Gut, as it does in Men.

Fabricius
Hildanus,
cent. 6. Ob-
servat. 37.

III. A Woman Forty years old, formerly my Pa- tient; after carrying a heavy Pail full of Water, complained of a pain in her Groin. This was fol- lowed with a Groin-Rupture on the left side, which, in a short time after, having broken the skin, burst out, whereat all the food she took, and Worms, came out. When the Wound was healed, the Rup- ture remained, the Pain in her Belly continued, and she was troubled with Wind continually, especially when she lay down, the Guts then returning in- ward. She thought her Belly was full of little Ani- mals, courting this way and that; But, by handling her, I perceived this her torment was owing to Wind, which proceeded from some days Obstruc- tions; she Vomited also every Morning. When she had taken a Clyster, the Obstruction removed, and her pain asswaged; yet at certain times an appa- rent Swelling returned, with a rumbling: When it hid it self in her Belly, and she had a rumbling, she was much tormented: but when it came out in a great lump, she was free from torment. Before the Gut could conveniently be put back, and the future mischiefs provided against, I ordered, that when she had broke the Wind, which distended her Guts, the Excrements, the fuel of putrefaction, should be Purged out, the Worms should be killed and brought away, with Remedies proper for this Pest. But

Bartholinus,
cent. 1. hist.
3.

But while the Remedies were delayed, the poor Woman died of the violence of her Pain.

IV. It is Queried, Whether a Maid 22 years old, Marriageable, of a middle stature, of a good habit of Body, if she should Marry, would she be Barren, by reason of a Rupture in her Groin, but well cured? And, if she be not Barren, Whether for the same reason she would not be in great danger in her Travel? It seems to me, that for that Reason alone she will not be Barren, because an Incision there comes neither to the Womb, nor to its neck, nor to any part deputed to Generation, as is evident

from *Aetius*, l. 16. c. 103. Therefore, since in such an Operation the foresaid parts are not hurt, nothing hinders but she may conceive. And since the Cicatrice in a Girl 13 years old, at which time she was cured of her Rupture, is long since grown together, and well cured; it will not break; and by consequence, when she has conceived, she will be in no danger for this in her Labor. This is clear, not from Reason alone, but from Experience likewise; for such Women have both Conceived, Gone with, and happily Brought forth Children without any danger.

Pet. Forestus, l. 26. c. 6.

A GUIDE TO The Practical Physician.

BOOK III.

Of Diseases beginning with the Letter C.

Cachexia, or a Cachexy.

Leucophlegmatia, or the White Dropfie.

The Contents.

Bloud-letting, Whether, and after what manner it is good? I. II.

Whether in the foot, if caused by suppression of the Men-
ses. III.

Purging hurtfull. IV.

In a Melancholick one we must Purge frequently. V.

The use of Spaws. VI.

For whom Sweating is proper. VII.

A Cachexy caused by the fault of the Kidneys. VIII.

From the fault of the Lymphatick Vessels. IX.

A White Dropfie from anointing with Mercury, cured by U-
rine. X.

Medicines.

I. **L**ETTING Bloud with a Lancet may sometimes be proper in those Cachexies, where there is an obstruction of the Liver, and a Plenitude, because perhaps the bloud being so in motion, and that quick-
ned, some of the corrupt Humours in the Vessels of the Liver will come out with the bloud: But especially if there be a Cacochymie in the bloud, it will be convenient to draw it out. ¶ The opening the Hæmorrhoids, as it is a Revulsion by the Mefaraick Veins, will be very good against obstructions of the Liver, Spleen and Mefaraick Veins; so also as it draws out the Cacochymie gathered there.

II. Letting bloud is sometimes necessary for a Cachexy: Which I experienced in my self, when after a Quartan Ague I was so far gone in a Cachexy, that I was sore afraid of a Dropfie. And certainly I was cured by no other means than by frequent bloud-letting, so that in ten days time I let my self bloud five times; at first the bloud came out exceeding foul, at last very pure, which was the conclusion of my bloud-letting. I have tried it in several others.

Botallus, lib.
de curat. per
S. M.

III. Physicians proceed amiss in curing the Cachexy of several persons, while at the very first they endeavour to promote the stopped Months, by letting bloud in the Foot, without any preparation of the Humours, or clearing the obstructed passages: For Nature discharges not the bloud by the Veins of the Womb, till the innate Heat have recovered its former Vigour, and Crudities be in a great measure consumed, which being done, we may proceed to bleed in the Foot, and to give Medicines to promote the Menses. And for the most part it falls out, when Crudities are concocted, and the Oeconomy of the whole body restored, that what Natural Evacuati-
ons were suppressed, do then return of them-
selves.

Enchirid.
Med. Pract.

IV. We should not give Purgatives to Cachectick persons; because it is most certain they hurt the Liver, and weaken the Ferment of the Bile: But we should give Lenitives repeated, equal to them; for a weak Agent reiterated is able to doe as much as a strong one can doe at once, and with less danger. ¶ I find our Physicians often commit this Error, insomuch that they abstain not from most violent Purgers in Cachectick persons, and so bring those bodies, that should have lived longer, to an untimely end. ¶ Some sick persons will Purge almost every day, because of some small alleviation they find thereby: But this is very bad for them, and they die in a short time; for it is very sure the bowels are exceedingly hurt thereby.

Freder. Hof-
mannus, m.
m. l. 1. c. 7.

Idem, l. 2.
c. 6.

V. Seeing

V. Seeing a thick and feculent Melancholick humour turns not easily into Sweat, more frequent Purging is necessary in this Cachexy than in a Phlegmatick one: for this may without the help of Catharticks be almost all concocted and consumed with drying Medicines: But the Melancholick Mud gathered in the Veins or Arteries of the Spleen, as by degrees it is concocted, so it must gradually be taken away by Catharticks.

VI. A certain great Drinker had so inflamed his Liver, that continually, even while he was fasting, or but just late to table, before he had scarce eaten one mouthfull, he was forced to drink, which I have observed in several to be a certain sign of a Dropsie coming upon them from the too great drought of the Liver, depending upon the heat; some fore-runners whereof I saw in his cachectick face. Because he desired to drink the Spaw-waters (for he refused other Medicines) he fetched them sometimes from *Griesbach*, where the Well is, and kept them at home, and according to my advice, when he had over heated himself with Wine, he accustomed himself to drink of them, to quench his preternatural thirst, which the Wine had caused. I gave him leave to go to the Wells, and to drink the Waters, as others use to doe. After this manner the use of the Spaws did both him good and others that laboured of the like intemperature of Liver; which the Vulgar abuse, thinking them to be good in most desperate Diseases, and drinking them by Quarts, whereby the natural Parts and nervous Kind (for which sharp things are bad) are hurt; besides, they are very bad for the Breast, and therefore for all that are troubled with a Cough and Shortness of breath. Sometimes I have prepared artificial Spaw-waters, which I have given for a Cachexy, and they have done good. ¶ The drinking of natural Vitriolick Spaw-waters continued for some Weeks, is very good to correct the Heat of the Liver, if it be used in time, before the Dropsie invade a man, and the Water be gathered in the Legs and Belly: for when it already falls out of the Veins, by reason they encrease its store, they will doe no more good, but will rather encrease the Swelling in the Dropsie, especially if (as they usually then do) they piss but little, and yet in the meantime drink much, which therefore, I have observed, hath hurt a great many people.

VII. Sweating with a Decoction of *Gualacum* in a Stove or in Bed cures a Cachexy. But in a Cholerick one you must sweat in a Stove, with a gentle heat: In a Melancholick one with a little more intense: And in a Phlegmatick one with a most intense Heat, that is, as great as the Patient can endure without fainting. This Cure is proper for such a Cachexy as happens to Maids or Women from Grief, eating of crude things or drinking cold liquours, but not for elder persons in whom it is bred by the use of strong Wine, Hippocras, Muscadell, Salt and peppered Meats, and such heating and drying things: for since in this case the Liver is exceeding hot and dry, and that there is great store of the Atrabilarious humour in the first and second region, that is, in the Veins of the Liver, Spleen, Mesentery, and in the greater Veins and Arteries, Bathes are more proper than a Stove, for a hot and dry Liver requires to be moistened, and not to be dried: And an Atrabilarious humour is but enraged and irritated by using hot things and profusion of Sweat.

VIII. It is worth observation, that a Cachexy in persons troubled with the Stone in the Kidneys, has had its original from an Ulcer in the Kidneys, when the purulent matter by reason of the obstruction in the Ureters regurgitating into the Kidneys, and infecting the Blood, hath infected the whole habit of Body.

IX. It often falls out, that a Man's Body becomes swollen, turgid and languid; and then the ti-

morourfulness of the Physician, grounded on no reason, predicts danger: But they may very properly be cured in a short time by Sudorificks used internally and externally. The cause of this Evil hath not its rise from the Intemperature or weakness of those parts, that the Ancients called *Noble*: Besides, it may easily be distinguished from the Dropsie; which the said parts do cause; for although the Patients be very sluggish and lazy, yet they are oppressed with no anxiety of heart, they breathe freely and from an open Breast, and their Belly swells not much: The watry matter is gathered first in the face and limbs, and if the tumid parts be prest with your finger, experience will shew that the parts are not so full as in a true Dropsie; wherefore some that are ignorant of the true cause, ascribe this Swelling to Wind. The Lymphatick Vessels being compressed, broke, or some other way obstructed, so that the natural motion of the *Lympha* is hindered, do cause the Ail.

X. When *N.* who was troubled with the Pox and a Water Rupture had been cured of both his Diseases by anointing with Mercury; after the same example he ordered one *Aldr. de Aldrichetti*; a strong Woman of a full Age, that was swollen with the White Dropsie, to be likewise anointed: She made much Urine without any Salivation; yet she felt a little pain in her Neck, and perfectly recovered.

Medicines especially made use of by eminent Physicians.

1. In an inveterate Cachexy I anointed the Belly and Feet which were swollen more than ordinary; with the following Liniment: Take of the tops of green Dwarf-elder; green Cranes-bill, Sauce alone, Flowers of Roman Chamæmil each 2 ounces, fresh Butter 1 pound, let them boil well. Strain them out and add of distilled Oil of Tartar rectified, Oil of Wax well rectified, Oil of Caroways rectified, each 3 drachms. Mix them and make a Liniment, to be used as above said. And take of this Cordial often every day: Take of Cinnamon-water 3 ounces, Oxymel of Squills prepared according to *Zotser* 2 ounces, Spirit of Vitriol dephlegmed 24 grains. Mix them for use. This water, which I always kept as a secret, was wonderfully commended by all people.

2. The Essence of *Crocus Martis* and a Mixture of it, do in curing a Cachexy excell all other Remedies.

3. The Water distilled off fresh Walnut-tree roots cut into little square pieces, steeped in Whitewine 24 hours, sweetened with Sugar-candy and exposed to the Sun for some days, taken in 3 ounces weight using exercise after it, cures the Green-sickness in Maids.

4. Take of the finest filings of Steel 1 ounce, *secula Ari* 1 drachm and an half, Ambergryse half a drachm, Essence of Coral, of Pearl each half a drachm, Amber prepared, Cinnamon each 4 scruples, Sugar what is sufficient. Mix them, and make a Powder. It is the best remedy for pale and depraved colours, as for Cachexies in Women, Men, Maids younger or elder; if the body be prepared and purged 15 days before, one after another. I have had admirable experience of this Powder in curing all Cachexies.

5. Chalybeate Salt is very good for a Cachexy.

6. When the Body is purged, Wormwood taken any way is excellent good to strengthen the Stomach and Liver, and absterge the humours. And this is a good Powder; Take filings of Steel, sprinkle them with water of Wormwood or Ash, wherein their Salts have been dissolved; leave them so long till they contract rust; Take of this *Crocus* 3 ounces, burnt Harts-horn prepared half an ounce, Magistery of Coral, of Pearl each 1 drachm and an half, Cinnamon, Crystals of Tartar 1 drachm, Sugar what is sufficient to sweeten the whole; Make a Powder.

H

The

Enchirid.
Med. Pract.
p. 170.

Platerus,
observ. l. 3.
p. 8.

Idem, Praxis
med. l. 3.

Enchirid.
Med. Pract.

Sennertus.

Barbette, A.
nat. Pract.
c. 14.

Rinodius;
cent. 3. obs. 9.

Joh. Lud. a
Frunden.
Elix. arbor.
Vitis, p. m.

Phil. Gual-
tius, Med.
Pract. l. 3.
pari. 5. c. 2.
Joh. Jon-
stonius, I-
dea Med.
pract. l. 10.
c. 4. tit. 2.

Joh. Querc-
tanus Pharm.
Dogm. rest.
p. 321.

Schroderus.

The dose 1 drachm. And this Chalybeate Wine is good, especially in a pertinacious obstruction of the Bowells, and suppression of the *Menses*, whence a Cachexy ariseth. Take of filings of Steel 3 ounces and an half, White-wine 4 pounds, infuse them in a Glas 8 days in the Sun or some hot place, shaking it often every day. Let the Patient take 4 or 6 ounces of this Wine two hours before dinner, shaking the Glas, and when he hath taken it, let him walk for two hours, if he be able. As often as you pour out one glass, you must pour in another, till half the Steel seem spent, then you must add no more.

Sennettus.

Calculus Renum, or the Stone in the Kidneys.

The Contents.

Signs and the Nature of the Stone. I. a.
 What Vein should be breathed? I. b.
 When a Purge should be given? II.
 Whether Cassia be proper? III.
 Diureticks should not be added to Purgers for prevention. IV.
 Whether strong Purgers be convenient? V.
 Of what things Anodyne Clysters should be made? VI.
 Whether their Quantity must be small? VII.
 Whether a Vomit may be given? VIII.
 When Diureticks may be given? IX.
 They must not be mixt with Food. X.
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 We must begin with the milder. XII.
 The use of them must be continued. XIII.
 They must not be too hot. XIV.
 Their Abuse must be avoided. XV.
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 What must be done next, when the Stone is got out of the Kidneys? XIX.
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 Whether it may be given one in an actual consumption? XXIV.
 Whether Pease-pottage may be given? XXV.
 The use of Astringents does good. XXVI.
 We should rather cool the Liver than Kidneys. XXVII.
 Coolers, especially in old men, often doe harm. XXVIII.
 Outward Coolers are of no use to some. XXIX.
 In prevention Bathing suspicious. XXX.
 What such Diet should be used? XXXI.
 A Draught of warm Water before Meal is good for prevention. XXXII.
 The turning of the Stone into the Gout is safe. XXXIII.
 Whether Nephrectomy be possible? XXXIV.
 Stone in the Kidneys mistaken to be the Colick. XXXV.
 Medicines.
 I. a. Gravel not subsiding in the Urine, but sticking to the sides of the Chamber-pot, signifies not a calculous disposition, but exceeding heat of the Liver. Spigellius saith, he hath sometimes found the blood in the Veins full of small Gravel. Nor does the subsiding Gravel necessarily indicate the Stone, but sometimes the material cause onely of the Stone, (for many that are free from the Stone do make Gravel) yet it intimates a disposition to the Stone. When Gravel that used to appear is afterwards suppressed, and pain is felt, and the Urine white and thin, it is a sign the Gravel is concreted into a Stone; and when it is made with pain and strangury, it is a sign of the Stone. ¶ Gravel that is bred in the Veins is mixt with the Urine and with the Sediment. But what is in the Kidneys, U-

Plempius, in Insitius.

Epiphanius, Ferdinandus.

reters and Bladder, presently resides as the Urine is made. ¶ Gravel frequently proceeds from adustion of the humours, which is bred in the Liver and Veins, and sticks to the sides of the Glas, nor does it sink to the bottom, as that which comes from the Kidneys. Besides, it breaks with rubbing in ones fingers, and appears of a Saline Substance, whereas the other neither yields to the fingers, nor can it any way be dissolved. And finally, because this Gravel hath a Saline Substance, it is dissolved in warm Urine, and no way appears in it while it is yet hot; but when the Urine is cold, it coagulates and sticks to the sides of the Urinal, just as Crystals of Tartar, which are dissolved in hot Water, do, when it is cold, coagulate and stick to the sides of the Vessel. So that the nature of this Gravel and Crystals of Tartar is very like. Riverius.

I. b. Hippocrates, 6. Epid. and in his Book *Of the nature of Bones*, orders bleeding in the Ham. Galen, on the contrary, 6 Aphorism, 36. advises bleeding in the Arm, if there be a Plethora, and violent pain, and the Disease be new, and he advises well: For if the humours flow from the whole body to the Kidneys, such a Remedy must be chosen as may make a Revulsion from thence; such as Bleeding in the parts above: If the Disease be inveterate, or bleeding in the Arm have preceded, then it is proper to bleed in the Ham. Leeches also applied to the Seat are very good, according to Aphorism 6. 10.

II. We must diligently take notice, that a Purge must not be given till the Pain be something asswaged: For even a strong Cathartick given while the Pain is violent, often does not purge, because at that time all the parts contract themselves, and do not assist the Medicine. Riverius, Præf. l. 14.

III. Some commend Cassia for the Stone; but I would caution the careful Physician, that some have found themselves exceeding ill upon using it, and have encreased their Disease: One complained to me, that heat of Urine always followed the taking of it. ¶ Petrus Pigray, l. 7. c. 4. writes, that Cassia agrees very ill with those that are troubled with the Stone. ¶ Two ounces and a half of Cassia given one in a continual Fever raised such a flux of Urine, that for three days together he made his Urine so hot, that every time he made it, he thought a red hot Wire had been drawn through his yard. Fabr. Hildanus, l. de Lithot. c. ult.

IV. Nephritick persons should have some familiar Medicine, that may help them to a Stool. For those who are loose and troubled with Fluxes, have not the Stone and Gravel; provided notwithstanding the Purges be not made up with Diureticks. I speak this, because at this present there are several who use Receipts that purge both by Stool and Urine. When there is mention made of Medicines to divert the Matter, there is no need of a Diuretick: Wherefore they doe very ill who in time of Prevention and for Revulsion's sake do use Cassia; for Cassia is both purgative and diuretick, therefore not to be used in diverting the Matter, and I look on Valeriola to be of this opinion, 6. Enarrat. Saxonia, loco cit.

V. In the Stone in the Kidneys although Hippocrates order violent Medicines, such as Spurge, to move the Stone; yet I think it safer to use Lenients, that may onely dilate the parts, then more violent ones, which perchance may draw greater plenty of humours to the Parts affected; Wherefore as in prevention we must use gentle Medicines, so I think we must use the same in the Cure. Mercatus, de Præf. l. 1. c. 6.

VI. Crato consil. 136. prefers the simple Decoction of Speedwell before all more generous inward Medicines for the Stone. The use (saith he) of a Clyster made of the Decoction onely of Speedwell with Sugar will doe more good than any Medicines taken by the mouth. You may put in the Decoction some fat of a Loin of Mutton, of a Rabbit, or a Capon, that so it may make smooth; if you can get none of these, you may take some fresh Butter. Therefore young Physicians may take notice, that a great Medley of many Simples is not always necessary to make a Clyster.

a Clyster. I can safely attest, my Patients have often found more benefit and ease in the Colick or Stone from a simple Clyster of Milk and Sugar, in which after *Crato's* example I boiled either Speedwell or Chamæmil-flowers, not Roman, but the common, that is more temperate than the Roman; than from Clysters of more ample furniture, made of Pennyroyal, wild Marjoram, Rue, Calamint, &c. Because these hot things by discussing do raise Wind, whereupon the Pain encreaseth, which is mitigated with Anodynes properly so called.

S. Pauli,
Quadrif.
p. 512.

Zecchius,
Consult. 50.

VII. We must take notice, that in Nephritick Pains Clysters must be given in less quantity than in other Distempers, lest the Quantity by distending the Intestines press the affected parts circumjacent, and exasperate the Pain.

VIII. Whether is a Vomit proper in this Disease? There are many young Physicians, who commend it for prevention, to expell the tartarous matter, before it be derived either to the Reins or Bladder: Some admit it in the very fit; because Nature seems to shew the way by reaching and vomit. *Hippocrates* saith, 6. *Epidem.* that men are better after eruginous Vomit. In my Judgment Vomit conduces by straining to the expulsion of the Stone or Gravel, as it does to the Delivery of a Woman, namely, by the violent commotion of the whole Body, and compression of the Muscles of the Belly. But we must take diligent heed, lest a Vomit be given to all persons without distinction of those that cannot bear one, and so Disease be added to Disease. *Severinus* advised me to this Remedy for a pain in my Bladder, but, I was very near a Pleurisie upon it. Mr. N. by his prescription took the Antimonial Wine, with great success, and lived very healthy after it.

Tho. Bartho-
linus, Cent.
1. Epist. 55.

IX. As Diureticks in the Cure of this Disease are fit and necessary to get the Gravel and Stone out of the Kidneys; so for prevention and in time of Health, we must abstain from them, lest while they provoke Urine they by use open those ways, and make a Passage to the Kidneys, whereby all the crude and bad humours that are bred in the body may tend thither, and afford matter to breed Gravel and the Stone. ¶ I warn my Patient that he carefully abstain from diuretick Medicines, and such as expell the Stone; for unless this be done, he will be certainly troubled with the Stone. ¶ They that in calculous persons use hot Diureticks, commit a mistake; because such Medicines bring filthy matter with them, and open the Passages: Secondly, they displace the Stone, and make it unequal and rough. Lest the Reins or Bladder should be hurt by the asperity of the Stone, Sagacious and Prudent Nature hath clothed it with a mucous and slippery Phlegm, lest it should pinch the live part. Diureticks do much harm, because they strip the Stone that was covered with viscid Phlegm, which by reason of its raggedness doth so prick, that in a short time it causes a mortal Ulcer, attended with cruel Symptoms. A certain Mountebank gave a Wretch troubled with the Stone most violent Diureticks, which caused exceeding dreggy Urine, the viscid Phlegm being scraped off, which was as a bed to the Stone: He presently felt himself better; but in a little time, the Stone being naked and sharp, ate and pierced through the sides of the Bladder, upon which there presently came an Ulcer, and that a Gangrenous one; and I never saw a man die so violent a Death.

Robtus in
Cellum, l. 4.
c. 10.

Crato, com-
pl. 246.

Sandorius,
Meth. vit.
error. l. 18.
c. 4.

X. In the Stone both of the Reins and Bladder, Diureticks to break the Stone must be given a long time after meat, and on an empty Stomach, and if it may be done, after the body is purged; for Diureticks are quickly carried to the Kidneys, and they drag along with them the Food crude and in-cooked, so they rather load the Reins and Bladder, and encrease the matter of the Stone. Therefore they doe very ill, that boil Parsly-roots or some other Diuretick with their meat and eat it for their Dinner or Supper:

Frid. Hof-
mannus,
m. m. l. 1.
c. 18.

XI. All Stones, at least those that I have yet found, are dissolved in the acid Spirit of Nitre, whence I conclude none can imagine that the coagulation of Stones, can proceed from an acid; therefore from something contrary to it. Now if a man do but consider the various things that promote the concretion of natural things, he will find the virtue lie in austere things, upon which score they give glutinosity and toughness to Fluids; to which if the earthy and saline volatile parts be joined, something not unlike the Stone will arise. Therefore I incline to the opinion, that the earthy matter, and saline volatile joined with the glutinous do by the help of the austere humour grow into a stone: But the virtue of the coagulating Austere is infringed by the sharp Acid, such as is found in the Spirit of Nitre. ¶ When larger Gravel comes away, and sinks to the bottom of the Urine, and is laying the Rudiments and Growth of a Stone, we must beside volatile oily Salts use things that dissolve the Stone, among which we deservedly ascribe the first place to Spirit of Nitre, seeing in it Stones are so easily and so manifestly dissolved and broken. And the Spirit of Nitre may conveniently be dropt into ones common drink, Beer, Wine, Broths, &c. to make them a little sharp, and so be used a considerable time, whose excellent Effect all will admire. ¶ Diureticks to break the Stone must, 1. Be apt to turn to Urine, to wit, (as *Helmont* saith) that they may touch the place affected. 2. They must have power to dissolve the Stone. 3. They must possess it in a specific Propriety. 4. They must be subtil, that they may spread every way. 5. They must be amicable to nature, lest they destroy all. 6. They must not be very hot. You should rather give such things as consist of an absterive virtue from a volatile Alkali and an acid, and that by their gentle sharpness do incide and cleanse the filth of the urinary passages, as also by their sweet fragrancy affecting the Reins do hinder the dregginess of the Ferment, and so prevent all occasion of the Stone. Such things also are good as asswaging the Pain of the Kidneys, do better fit them to expell what is hurtfull, such as Saffron, and Cassia and Rheubarb deprived of their purgative Faculty. ¶ I will relate what I have observed concerning Spirit of Vitriol in the Stone of the Kidney and Bladder. Diureticks are of two kinds, one aperitive, and the other incisive. Aperitives draw the matter to the Kidneys, and therefore if these be affected, are very suspicious, because we draw the matter to the part affected: But Incisives carry not the matter to the Kidneys, but onely by inciding subtilize, and so the matter being made subtil passes the Kidneys. Hence it is (and I ever use it with success) that if in the beginning I give Spirit of Vitriol to break the Stone or cut the gross humour, I quickly see a happy Issue. And the Spirit of Vitriol, though it be diuretick, yet it onely incides, upon which subtiliation while the matter passes out, the Urine appears more copious, and it is truly a Diuretick by accident, not that it carries ought to the Kidneys, but because the matter, when it hath no impediment, finds an easie passage. And that is attempted in vain after the third or fourth day, which may be done the first, without which the Pain is prolonged three or four days to the great damage of the Patient; for then we must stay for universal Evacuation, which in this case is not necessary in the beginning, but may very conveniently be celebrated when the Pain is over.

Fr. Sylvius,
Prax. l. 2.
cap. 55.
sect. 50.

Idem, sect.
91, & 92.

Frid. Hof-
mannus, m.
m. l. 1. c. 18.

Panarolus,
Pent. c. 3.
obs. 41.

Hofmannus,
ibid.

XII. Of which Diureticks nevertheless distinction must be made, that in the first place the milder be used, and the more temperate, before we arrive at the sharper, which do enflame the Arteries of the Liver and Reins.

XIII. In the use of Medicines that break and expell the Stone, we must take notice that they must not be used once or twice onely, but oftner, till the obstructed passages be opened: And while they

are given, the Reins and Bladder must be fomented with Baths, Fomentations, Unctions and Cataplasms, that they may work the better: And also some liquours, that are of thin parts, such as vinous White-wine, must be given now and then, and internal Emollients, Laxatives and Smoothers of the passages must be made use of, that the ways may be open, and the acrimony of other Medicines may be qualified.

Riverius.

XIV. Medicines that attenuate the Stone without violent heat, conduce much to health: for the hotter sort of things consume the finer parts, and leaving the grosser do harden the Stone, and draw new matter to the Reins and Bladder from the whole Body: Therefore rather let them be of tenuious parts and cold.

Heurnius.

XV. Some in the retention and interception of the Stone in the Ureters do commend the Powder called *Pulvis Lithontribos* and some stronger things, which before purging the whole body do drive many bad humours from above to the Kidneys, whereby the Stone is not only firmer fastened in the Ureters; but internal Inflammations are also bred, and Death it self follows, which I have tried.

Fabelius Hildanus.

XVI. *Gainerius* hath taken notice, that we must observe first to join piercing Remedies with those for the Stone, as Cinnamon, Nutmeg. 2. To add such a thing as may strengthen the virtues of the Medicine, to the end they may play upon the Stone with their whole strength, as Maffick and Gum. 3. That they have fineness of parts to pass the better. 4. Something that takes off acrimony may be added, as Roses, Liquorish, Linseed.

Heurnius.

XVII. Whether is Spirit of Turpentine proper for the Stone in the Kidneys? It is good, for it is a dispersing Medicine, penetrates deep, and hath an excellent virtue in purifying the Bowels, dissolving gathered Tartar, and discharging it by Urine; yet lenitive Purgers should be made use of before we come to the continual and daily use of it: Although in the use of Turpentine it self in substance this is not requisite, because it hath it self a purgative virtue, especially when it is mixt with powdered Rheubarb, according to *Crato's* description in *Scholtzius*, *cons.* 152. It helps by its temperate heat, whereby it befriends the parts destined to concoction, for which reason it is good for those that are troubled with the Stone, as it helps concoction, that so the peccant matter may the better be separated from the Blood. You may see in *Amatus*, *cent.* 1. *curat.* 63. the History of a Monk who every morning for several months swallowed a piece of Turpentine as big as a Nut fasting, and was so cured of the Stone and Gout, when other Medicines would do no good.

Gr. Horstius, Probl. Dec. 1. 8. q. 1.

XVIII. They are in error, who always use attenuating and inciding Medicines, as if there could be no Gravel without a fulness of gross humours, and as if there were not some very cholerick persons to be found who have their blood and other humours very thin, and are troubled with the Stone. For I am of the opinion that there is no one living, but hath so much grossness of humours, that, if it stay in the Kidneys, may cause the Stone: And that there is so much Phlegm in a man that is not phlegmatick, as may make up one Stone.

Sanctorius, Meth. 1. 3. c. 7.

XIX. When the Stone is voided, although all danger be over; yet I use for two or three days following to procure a perfect absterion and cleansing of the Reins, by giving a *Bolus* of our Turpentine washed in Mallow-water with Liquorish powder, and drinking upon it an Emulsion of Melon-seeds, made with Mallow or Barley water, but very thin.

Fortis, cons. 96. cent. 3.

XX. A certain person fell into grievous pain in his left side under the bastard Ribs, attended with vomiting much Blood, as often as he stooped it returned upon him, so that he grew very weak upon it. Dr. *Mabius* judged there was some large Stone lodged in the left *Hypochondrium*, and that by moving

it the Blood was extravasated in so great quantity, powred into the Stomach, and then vomited up. He durst not prescribe things to force the Stone, lest when the Vessels were unstopt, they should open wider, and by farther vomiting of Blood his life might be endangered: Therefore he gave him calcined Harts horn for several days in some fresh broth: He ordered the pained part to be fomented with Mallow leaves, Chamæmil flowers and Linseed boiled. And so his Vomiting ceased, the Stone was moved to his back, and then to his bladder, it stuck in the neck of the Bladder, and put him to cruel pain. Then he gave his anodyne Salt in a decoction of Mallows: he ordered Mallow leaves and Linseed boiled in Milk to be often applied to his Loins and Privities, anointing his Privities with oil of white Lintree. And so within 6 hours he voided a Stone as big as a Bean, and the Patient, through God's Mercy, was restored.

Frid. Hofmann, m. m. p. 253.

XXI. If in the Stone of the Kidneys the Patient piss much Blood and often, and so two contrary medical Intentions do continue, the case will be hazardous; for it is the most difficult thing to find a Remedy in the Art, which will perform opposite operations, namely, open and bind, break and close: And therefore, setting aside all other things, we must presently have recourse to the Remedy by *Aristotle* called *Sacred*, namely, the Bath-waters, wherein the vitrioline virtue is most eminent, than which no safer or better Remedy can be thought or used in the present case. For such Waters expell violently and efficaciously, and therefore are lithontriptick, and upon score of the Vitriol staunch blood; besides that in strengthening all the Inwards, they very much cool the Liver and Reins.

Fortis, cons. 95. cent. 3.

XXII. In the cure of the Stone many examples teach us, that much caution is necessary: For strong Diureticks do not only encrease the Pain, the Stone being violently moved, and not removed; but they cause pissing of blood, excoriate the urinary passages, and sometimes impact the Stones into the narrow passages; nay, and raise Convulsions and Epilepsies, while the Stone is violently driven in, and not driven quite out, as I have observed. Therefore we have eased those of their pains that have had large Stones in their Bladder, only by lenient and emollient Clysters, so that for several years they have lived without any evident trouble in fits of the Stone. And no wonder, since emollient and abstergent Clysters do bring away the mucous matter always in a manner joined with the Stone, and clear the urinary passages of Obstructions: they bring away Gravel also, and make way for the Urine. Some years ago I experienced this in my self, when I was troubled with a most violent pain in my left flank, I discussed it only by taking three mollient Clysters in one day, the Gravel being loosened, and the viscous thick matter joined with it scoured likewise, and brought away with the Urine for several days together. And by these gentle means so much was done in cleansing the urinary passages, that from that time to this I never fell into any such pain.

Oethzus, apud Skenchidam.

XXIII. There are some that think that Asses Milk is good for People troubled with the Stone, because, in that it exceeds all sorts of Milk in subtilty and serousness, it possesseth rather an opening than a stopping faculty: But if in Bodies prepared for it, the Stone be bred of Cheese; If all Milk consist of three substances, Cheese, Whey and Butter, and therefore whatever things participate of Cheese, they do retain this faculty more or less, according as the caseous substance abounds more or less in them: the Consequent is, that the Stone may be bred by the use of Asses Milk, though not so easily as by a thicker sort. However a Milk of much Serum does the Bowels sometimes more good by reason of its serous substance, whereby it deterges, than by its caseous substance hurt, whereby it should obstruct: nay, it cures

cores obstructions, as frequently it happens in the milk of Camels that have newly foaled, which is very good for a Dropsie, as *Avicenna*, l. 2. c. 442. saith. But this happens to their Milk upon account of their Pasture; for Camels feed upon Spurge, Widow-wail and the like, from which the Milk acquires a purgative faculty, and by reason of the *Serum* very detergent. Now Womans Milk and Asses are exceeding like, and both of them moderately partake of Cheese. That Woman's Milk breeds the Stone, *Galen*, lib. 6. *Epid. Sect. 3. com. 15.* and *Avicenna*, lib. 3. *fen. 18. tr. 2. c. 16.* do shew. *Galen* indeed 6. de *sanit. tuend.* allows Asses Milk to the calculus; but then it is for preservation, and for the removal of those inconveniences, which the Stone, while it is expelled, usually leaves in the body, that is, of an Ulcer in the parts which serve for expulsion of Urine, these being exulcerated by the ragged substance, or greatness of the Stone in its passage; and of the dry-temperature introduced by an extenuating diet, watching, vacuation and pain: Asses Milk corrects this by moistening, cooling and nourishing; it cures the Ulcer by cleansing, mitigating pain, and by glutination: *Ætius* allows of it; but after cutting in the neck of the bladder, and that the Stone is got out. See him, *cap. 5, 8 & 10. lib. 11.* And I say, that Asses Milk of it self cannot deterge and expell Gravel: because *Serum* does not purge the Reins and Bladder on its own account, seeing this office belongs properly to Diuretick Medicines: But by accident it may, that is, given in great quantity, whereby running by the Urinary passages, it may carry with it all manner of Excrementitious Humours it finds in its way, if so be it pass by way of Urine, and be not kept in the body; for if it be kept, and be not purged out by the Urinary passages, it cannot do any good. There might be also another way of giving it, that is, mixt with Diureticks, as the Ancients used.

Gr. Vir. Aug.
genius, tom.
1. lib. 2.
Epist. 1.

XXIV. If the Patient be consumptive, and there be an Indication to break or diminish the Stone, Asses Milk cannot be convenient, because it neither breaks nor diminishes the Stone. Nor can the extirpation of the Stone, and the cure of the consumptive-body concur in this *Materia Medica*; for the Consumption requires the Milk to be kept a long time in the body, that it may moisten, cherish and refresh all the solid parts: But the Stone requires it to be expelled much sooner by the Urinary passages, because, if detained, it would cause grievous inconveniences.

Id. m. ibid.

XXV. For those that are troubled with the Stone in the Kidneys, Broths may be made of Pease, and seasoned with Anniseeds, Fenilseeds, Juniper Berries, &c. And that the pains of some Nephritick persons are exasperated by such Broths, and others on the contrary are preserved by them, neither of these matters wants a Reason. For we must know that they onely are ill after eating of Pease Pottage, whose Pelvis of their Kidneys is beset with the Stone, covered with a slimy Mucus, which while the Pease Pottage does as it were rub off by its absterging Quality, these sharp stones prick the Ureters, whence comes grief and other symptomes, which draw the sixth pair of Nerves of the Brain into sympathy. So likewise even Turpentine it self, than which there is not a better Medicine against the Stone and difficulties of Urine (even those which the filthy Pox causeth) sometimes does encrease nephritick pains. But this Pease Pottage doth preserve others from nephritick symptomes, and those especially who have not a slimy, viscid and tough mucus turned into Stone in the Kidneys, or those from whom it forces gravel or little stones, the Kidneys not being Ulcerous. And thus not onely both these sorts of people, but all in general may be secure from the flatulency of the Pease.

S. Pauli 2^{us}.
dript.
Botan. p.
435.

XXVI. *Trallianus* approves of Myrtle to evacuate the Stone: Yet it may be questioned what way we

may safely use this Adstringent Medicine to expell the Stone. It consists of contrary faculties; for it does not onely bind, but hath also something of Acrimony in it by reason of its tenuious and hot parts. This is the reason why *Dioscorides* saith, that Myrtle provokes Urine. In the mean time we must note, that Astringents are used against the Stone and difficulty of Urine, both joyn'd with diureticks, that these may the longer be detained in the Kidneys: and sometime by themselves alone, that strength may be added to the weak Kidneys. ¶ I have heard from great Practitioners, that most men suffer this torture for their flaccid reins; hereupon Astringents came in use, as Syrup of Lemons with Water of the herb Horsetail, &c. ¶ Seeing none but hot Kidneys breed the Stone, and that they are much weakened by strong Diureticks, it is no wonder if by the use of the Brier Sponge, called *Bede-gar*, the Reins be strengthened, and thereby more fit to expell the Stone. ¶ If in the cure of the Stone we could well distinguish Medicines, we should have fewer troubled with it. For they that perpetually use Diureticks, properly so called, especially the first ways not cleansed, when they have thus brought the calculous matter to the Part affected, they make that which is ill worse. How much better do they that once every quarter in the year do scowre the first ways, as they call them, and then they take Almond-Milk for several days, And for the Cure, before all things they purge gently, afterwards they use Diureticks, improperly so called, that is, cold ones, which restore the tone to the Kidneys, as Syrup of Lemons, Chamæmil, &c. with the Water of Sloe-flowers, Strawberry, Violet, Mallow common and Marsh, Horsetail, Toadflax, Plantain, &c. some of which are astringent, and not diuretick: others are diuretick onely for their watry substance.

Capivaccius.

Hofmannus
2. de medic.
offic. p. 310.

Idem, ibid. p.
74.

S. Pauli 2^{us}.
dript. Botan.
ci Class. 2.
 voce Cynot-
baros.

XXVII. Where we must note, that cooling Cataplasms and Inunctions should be applied to the Liver before the Kidneys, when the heat of the Kidneys proceeds from it; or when some strange Salt, bred by the digestion of the Liver, hath crept, by means of the bloud, into the Kidneys, then this being inclosed, and because not vital, troublesome to the *Archæus*, in process of time grows hot: hence proceeds this heat of the Kidneys.

Frid. Hof-
mannus, m.
m. 4. l. c.
12.

XXVIII. Empiricks are in an error, that cool miserable nephritick old men, who are deprived of heat, giving them Spaw-waters, and Whey; because they believe, excess of Heat must necessarily concur to the production of the Stone, and they urge, that heat must necessarily be a mean to dissolve the thin parts, and leave the gross. But a moderate heat is able in process of time to harden and condense the clammy matter that is settled, as is evident from *Galen*, 6. *Epid. 3. 15.* Heat, saith he, if it be but moderate, is sufficient to harden this matter, seeing in warm Waters that spring of themselves, though but a little warmer than ordinary, tophi are seen to grow. So Stones grow in the bladder, which is far colder than the Kidneys, both by reason of its nervous substance, and of the Cavity, into which, after making of water the air gets, lest there should be a Vacuum.

Sanctorius,
meth. vii.
err. l. 3. c. 7.

XXIX. Outward Coolers applied to the Kidneys in fat and fleshy Bodies are of no use, because their virtue cannot reach the part affected, and by onely condensing the outer parts they are apt to encrease the heat inwardly.

Fortis.

XXX. There are some that prescribe a Bath of sweet Water, which I have ever suspected, as too much loosening: Instead whereof the Reins should be anointed with Unguent. Rosæ, Mesues, and *Infrigidans Galeni*, and Water-Lily-leaves applied to them.

Idem consult.
98. cent. 3.

XXXI. In meat and drink, seeing thence the matter of Gravel and Stone takes its beginning, that we may prevent breeding of it; Moderation must be used, and the food we eat must be of good juice, but

but we should especially accustom our selves to temperate Meats, and therefore we must seldom and sparingly use salt-meats; for it is a principal Rule in the Cure to abstain altogether from very salt things, as also from the earthy and dry, since from such the matter of this earthiness does arise; and from very sharp and hot things, seeing by the Gravel compacted into a Stone, the Kidneys are heated and dried. And therefore we are rather solicitous in prohibiting all salt and spiced meats, than crude and clammy ones, and such as are accounted to breed phlegm: seeing these do indeed breed a thick juice, which creates obstructions; but they cannot be converted into an earthy matter, unless some other earthy matter be mixt with them.

Platerus.

Zecchius,
consul. 13.

XXXII. This must never slip your memory, that nothing is better to bring away the Stone in the Kidneys than warm Water, or Chicken, or Veal, or Mutton Broth, if four or five ounces be drunk pretty warm immediately before meat, morning and evening. ¶ That the great heat of the Kidneys may be remitted, which is as the efficient cause of the Stone's returning, I commend the taking of boiled fair Water, to the quantity of six or seven ounces, before every meal, twice, or at least once a day: for nothing renders the Kidneys so free from Recrements, and so temperate. And their fiery heat is at length extinguished with the warm Water, that they can never after breed a Stone.

Idem consul.
17.

XXXIII. It is my advice, that when other things do no good, the Matter be retracted to the Joints: for the turning of the Stone into the Gout is most easie, and of this into that, and it is less dangerous to be troubled with the Gout than with the Stone: for the Gout pain never endangereth Life by its trouble; but the Stone in the Kidneys and Bladder, by their many Agonies, and those incessant, kill the miserable Patients. Therefore the matter must be diverted to the Limbs by Frictions, frequent Bathings, hot Inunctions, Sinapisms and Blisters.

Saxonia
Pract. c. 36.

XXXIV. Cutting for the Stone in the Kidneys is indicated by Hippocrates, lib. de intern. affect. l. 15. But when it swells, and bunches out, about this time you may cut upon the Kidney, and when you have taken out the Pus, you may cure the Gravel with Medicines that provoke Urine. Whence it is manifest, that cutting for the Stone in the Kidneys was known to the Ancients. Avicenna also makes mention of it, but with Bacchanellus I think it impossible, because way must be made through the Muscles, through the Back, through the great Bones, through the Nerves and Arteries and great Veins. I think this cutting can then onely be administered, when according to Hippocrates, the Kidney is swollen and elevated, or when it is suppurated: for in this case Nature prepares a way for her self, and those that have been so cut have recovered, as Schenckius out of Celsus relates, &c. And I also observed it in a young man, from whom two Stones with matter came out, through an Abscess in the Loins, that opened of it self: but in any other case I believe it altogether impossible. It were an excellent thing if it could be done with safety; but no man is obliged to impossibilities. But if this be done by Nature, May it therefore be done by Art?

Dom. Pan-
rol, Pen-
ult. observ.
42.

I Answer, that many things are done aright by Nature, which in no wise can be done by Art; We have an example in Hydropick persons, in whose Legs, if Ulcers arise of themselves, Health appears; but if they be made by Art, they corrupt, and death follows. Ambrosius Paræus, in his Chirurg. magn. lib. 24. c. 16. relates, how a Nobleman of Mantua, who was troubled with the Stone in the Kidneys, was condemned to be beheaded; but at the request of the Physicians in Paris, with the Magistrate's leave, he was cut, the Stone taken out, the wound healed, he cured, and this was his punishment. But if this operation be performed in the Loins right against the Kidneys, it is joyned with great and imminent danger, because by that way you must come

at it through the Muscles of the back, the Nerves, the Aorta and Vena cava, with hazard of fainting and death. Which if it be tried to be done by the flank, and by drawing the guts on one side, way be made to the Kidney, although indeed there be less danger in this (as *Roussetus de partu caesareo* observes) yet the conflux of the blood into the Cavity of the Abdomen is not without some, and a Cicatrice in the Kidney is very difficult, so that for these causes, it is either not to be attempted at all, or at least with the prognostick of death premised.

Ben. Sylvati-
cus, cent. 3.
consul. 55.

XXXV. I knew a certain Woman, whom several Physicians affirmed to be troubled with the Colick: But I at the first visit (because she was very numb, and there were other signs of the Stone) judged it to be the Stone, which nevertheless they said was false for several reasons. So I was discharged, and they persevered in the Cure, and continually gave her hot and dry things, till she changed life for death. When her body was opened, a great Stone was found in her Kidney, and I regained my credit.

Gerardus
Bergensis, de
aric. & re-
num morb.
curat.

Medicines especially made use of by eminent Physicians.

1. The following Medicine speedily brings away the Stone by Urine. Take 7 cloves of Garlick, 9 grains of Pepper: bruise them small, give them to drink at once with old Wine in the Bath.

Ætius Te-
trabi.

2. This Powder breaks the Stone wonderfully. Take of the seeds of Marsh-mallow, Violets, Mal-low, each 5 grains, of Gromel, Liquorish-root, each half a scruple, of *Lapis Judaicus* and *Spongæ* each 3 grains, of the powder of the stones of Dates, Cher-ries and Medlars each 1 scruple, Melon Seed half a drachm. Make a Powder. The dose is 1 drachm in 2 ounces of small White-wine, or *Oxymel*, or in 3 ounces of a Decoction made of Elecampane in Water and a little Vinegar.

Joh. de Al-
tomari, de
med. hum.
corp. malis
c. 54.

3. I have cured almost 600 of the Stone in the Kidneys by the following Syrup. Take of the Roots of Saxifrage, Butchers-broom, Lovage, *Eringo*, Rest-harrow, Anise, Fenil, Parsly, Grass, each half an ounce, Horse-Radish 2 ounces, of the Leaves of Betony, Burnet, Tops of Marsh-mallow, Nettles, Pennyroyal, Rocket, Calamint, Knotgrass, Pellitory of the Wall, each half an handful, Winter-Cherries No. xx. *Sebesten* No. xv. Bark of Baytree-root 3 drachms, Seeds of Basil, Burdock, Parsly, *Seseli*, Millet, each 3 ounces, Raisins, Liquorish, each 3 drams. Let them be boiled in *Balneo* from 10 pounds till 6 remain. Of which with Sugar 4 pounds, clarified Honey 2 pounds, make a Syrup, spice it with Cinnamon 1 ounce, and Nutmeg half an ounce. The dose 3 ounces, with 6 ounces of the Decoction of *Eringo* for 15 days, 5 hours before dinner; but universals premised.

Horat. Augu-
stinus, Epist.
med. l. 12.
Ep. 1 & 2.

4. I found ease by no diuretick, except Bean-shell-water, which brought away Gravel; so that more may be attributed to this Medicine in bringing away the Stone than to *Millepedes*.

Tho. Bar-
tholinus.

5. Eggshells, when the Chickens are hatched, are given with singular success, either to break or expell the Stone. Several reckon this Lithontriptick among their Secrets.

Idem;

6. It does a great deal of good in loosening the Urinary passages, if Chervil chopt very small and fried in a pan with Oil of Scorpions, be applied to the part grieved. ¶ When the ways are loosened nothing is more effectual to remove the Stone, than if 1 drachm of pure Nitre, i. e. *Sal Prunella*, be given in Rhenish-wine warm, by which Medicine alone I have often brought away the Stone of the Bladder from Children. ¶ Crabs-eyes are of tenuous parts and diuretick, they break the Stone, and force it away by Urine, especially the Liquor of them, which prepared after this manner is the best; To Crabs-eyes finely powdered and put in a Glass, pour some

Beverovicus
de calculo, c.
12.

Id. Ibid.

Acetum

Acetum Terebinthinatum, stop it, and digest it for a night in hot Ashes. The next day pour off what is dissolved, and pour on more, repeating it so often, till you see all the Crabs-eyes dissolved. What Vinegar you have got, filtrate and evaporate it, the Salt will remain in the bottom. Bruise it, and dissolve it in a Cellar into Liqueur. Eight or ten drops given with Horse-Rhadiſh-water are far more efficacious

than they are in substance. ¶ *Quercetanus* his Nephritick Water is very good; Take of the juice of Horse-Rhadiſh, Lemons, each 1 pound and an half, Water of Betony, Saxifrage, Silver Weed, Vervain, each 1 pound, *Hydromel*, Malmſey-Wine, each 2 pounds. Let them stand four or five days upon a gentle fire in *Balneo*. In these Liqueurs mixt together steep of Juniper Berries bruised 3 ounces, of the Seeds of Millet, greater Burdock, Saxifrage, Nettles, Onions, Anise, Fenil, each 1 ounce and an half; of the four greater cold Seeds, Marshmallow each 6 drachms, *Spec. Lithotrip. Elect. Ducis & Justini*, each half a drachm, burnt Eggshells, Cinnamon, each 3 drachms, Cloves 2 drachms, then strain them well out, distill them in Ashes. If you take 2 drachms of this Water, it doth wonders in suppression of Urine, breaking and expulsion of the Stone, to which if you add its own Salt in a convenient quantity, it will become a far more excellent Medicine.

Idem p. 179.

Balthasar
Brannerus
de calculo.

J. Caf. Claudius.

Crato, l. 6.
Conf. 79,
l. 80.

7. The following Syrup is an excellent Remedy, leaving no calculous matter behind in the Kidneys, if after Purging 2 spoonfulls of it be taken twice or thrice every week in the morning. Take of the juice of Speedwell half a pound, of ground Ivy 3 ounces, of Purslain 1 ounce and an half, let the expressed juices, when they are strained, be made into a Syrup.

8. This is a familiar Medicine with me; The extract of *Millepedes* made with hot Water. The dose 2 ounces.

9. Draw the juice out of Purslain, dry it and make it into Pills, give 1 drachm of it, it expels the Stone to a wonder. ¶ The distilled Water of a Man's Urine, or a Bull's, if the Patient doth not loath it, conduces wonderfully to the breaking of the Stone, and provoking of Urine. ¶ Let the Patient eat 9 or 10 Hazle-Nuts well picked before dinner and supper; for I have found by certain experience, that not a few, who have been afflicted with the cruel tortures of the Stone, for a long time, by eating of Hazle-Nuts have been cured. ¶ Strawberry-water with the Kernels of Hazle-Nuts bruised, taken in a morning, so as you can sleep upon it, is good for prevention. ¶ In a most grievous pain and heat of the Kidneys, I have found this plaster help to bring away the Stone with a great deal more ease; Take 9 Crabs, boil them in a sufficient quantity of Water or Milk, bruise them, and boil them, and squeeze out the Juice. Steep the Crum of a White Loaf in this Juice, add the Yelks of 2 Eggs, fresh Butter and Oil of Violets what is sufficient, mix them; spread it on a linen cloth, and apply it to the Reins and Ureters. ¶ For the Stone, Take of the best Malmſey-Wine 3 pounds, Peach-Stones No 100, Bitter Cherry-Stones No 200, fresh Elder-flowers 8 ounces: Bruise them, and let both them and the flowers be infused in the Malmſey-Wine, but let there be two several Infusions, one for the Stones and another for the Flowers; let them stand a day in Infusion, and then distill them. Drink four or five ounces of this Water, it quickly breaks the Stone, so that it is voided by Urine. ¶ I prefer *Eringo* Roots candied, or steeped in White-wine, and Syrup of the Juice of Speedwell before all, though I am not ignorant that the Roots of Brier and Rest-harrow doe much good, when the Stone is manifest. ¶ In the Stone of the Kidneys the following Cataplasim, I find, doth wonderfully assuage pain, and force out the Stone with great benefit and success.

Let Pellitory of the Wall be boiled with Parsly-Roots, let the Roots when they are squeezed out be cast away, and add 8 or 9 Onions roasted in Ashes, pour on some Oil of bitter Almonds, and in very grievous pains Oil of Scorpions. ¶ For the Pain of the Kidneys, caused by the Stone, there is nothing better than a Decoction of Speedwell, and the inspissated Juice does as well.

Crato in consiliis.

10. There is a fungus growing to Stones, called *Lyncarius*, which dried, powdered, and given in Diuretick-Wine, doth so purge the Reins, that a Stone will never grow again there, which is confirmed by manifold experience.

Claudius De calculo.

11. The Sap of the Birch-Tree hath a wonderful property by nature, while it admirably moistens our Balsamick Spirit, that is the coagulation of the Stone, and by its radical moisture doth hinder, that by its dryness and heat it does not coagulate the useles and volatile *Sordes* of our Liqueurs.

Pet. Joh. Faber.

12. One kept the following Clyster for a great Secret. Take a pound and an half of decoction of Miller, and give it.

Jacob. Fontanus.

13. In the Stone this is a more powerfull Remedy; if a Hare be cut in pieces, put in a new pot, well luted and baked in an Oven, and then powdered. *Atius* and *Sextus Platonius* do prove this to be a very proper Remedy; for if this powder be put in Water or Wine, and the Stone be put in also, you will see the Stone dissolved in a short time. And we have experienced it not onely good to break the Stone, but to prevent it, to which powder we add some Turpentine, Liqueurish Juice, or Oxymel of Squills.

Christ. Gualt. rinus, Conf. Med. 125.

14. Fresh Oil of Hazle-Nuts, drawn by a Press, is commended, by the daily use whereof, a certain Physician attests he hath seen several Stones voided. The dose is 3 ounces.

Casp. Cal. de Heredia.

15. Motherwort is an excellent thing in all diseases of the Kidneys: for according to *Montagnani*, it is a secret Medicine, that hath a power beyond all others to purge away Urine and the Stone.

Fredet. Hoffmannus, m. l. 1. c. 12.

16. The blood of a young Fawn dried and given in a drachm weight, wonderfully expels the Stone, according to our own experience.

Wolf. Hoffmannus.

17. The Root of the herb Vervain bruised, and drunk in good Mede a little warm, doth not onely help those incredibly that are troubled with the Stone, but quickly reduces whatever it is that hinders the Urine.

Joh. Mercurius.

18. Juice of Lemons hath helped many in the Stone, which when carefully cleared, and taken in Malmſey-Wine, I have experienced not hurtfull to the Stomach, but most effectual to purge the Reins. However, if the Stomach should receive any harm, let the Juice be distilled by an Alembick, and then it is a most safe thing.

Christ. Gualt. rinus, Conf. 126.

19. The flower and seed of Star-thistle are highly in request among the People, whose force and efficacy in purging the Reins and Bladder, we daily find more and more, if 2 ounces of its distilled Water be taken in the morning.

Ind. Mercatorius de Calculo, p. 756.

20. Let the Patient take Sugar of Roses an hour before meal the whole year through; for it is an excellent Remedy for the Kidneys.

Joh. Bapt. Manius, c. f. 194.

21. A certain Noble Matron found the admirable virtue of Golden-Rod, first made known by me, in innumerable Nephritick persons with happy success.

Carolus Fris.

22. Take Wheat and boil it till it swell or burst, put it hot into a bag and apply it: You may trust this as a secret.

Hercul. Saxonia.

23. Goats Blood mixt in a Mortar with Barly, and applied as a Cataplasim to the Part grieved, doeth much good in ease of the Stone, or any Tophus in the Reins or Bladder. ¶ If the Stone in the Kidneys be hard, and not to be broken, and by reason of obstruction Urine be stoppt, the herb *Eacony* drunk with Wine and Honey is very good.

Alex. Trallianus, l. 3. c. 34.

Idem. c. 33.

24. Sennertus commends *Lignum Nephrcticum* and *Lapis Nephrcticus*, taken either inwardly, or onely worn about one.

Calculus Vesicæ, or the Stone in the Bladder.

The Contents.

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Medicines.

I. **W**HETHER can the Stone in the Bladder be broken with Medicines? Many utterly deny it, many affirm it but coldly: I with *Galen*, *Hippocrates*, *Dioscorides*, *Rhafs*, *Avicenna*, and infinite Classick Authours (who prescribe many Simples and Compounds, acting by their tenuity, acidity, asperity, and by their Diuretick virtue) do hold, that there are things in Nature which break the Stone. What hinders it I do not see, since there is a dissolving Salt, as well as a coagulating one, and that the virtues of things must not be denied in Plants, Herbs and Stones: We see also how soft Water, by continuance, doth hollow the Stone, that Iron is eroded by virtue of Simples, and that there are Simples which soften Stones, and why not break them. We read in *Ætius*, l. 2. how *Philagrius* cured the Stone in the Bladder with Goats-bloud, and a Hedge-Sparrow mixt together: How a Jesuite at Rome cured a Printer's Son with *Millepedes* rightly prepared: How *Rhafs*, lib. 9. cured an old Stone in the Bladder with his Pills, with which *Horatius Augenus* and his Father, and other Physicians, cured several of the Stone. If the fore-cited Authours commended their Medicines, and they had no such Virtue, What did they in so weighty an affair, but put a cheat on Mankind, which to say of *Hippocrates* is Blasphemy, who, according to *Macrobius*, never deceived others, nor himself? *Bartholomæus Turrianus* in *Iatroch.* lib. 4. f. 269. broke a Stone that was then designed to be cut, by giving a little powder of Crystal to drink, or rather the dissoluble substance thereof; which same Liquour *Th. Maffetus* mentions,

de jur. & præstant. Chymicorum. Now Crystal is made soluble, if it be calcined in a Potter's Furnace at least nine times, then it becomes of a brittle substance, and put in a Cellar, it melts like Oil of Tartar: Or let the Crystal Stone be heated in the fire, and quenched seven times in the water, or Spirit of the Lesser Nettle. According to *Johannes Prævotius*, the Stone in the Bladder is broken by a Plaster of White Onions, boiled, and applied to the bottom of the Belly. If therefore Histories be extant of persons troubled with the Stone, that have been cured by Medicines, the chief Remedies must be tried, before the Patient commit himself to the greatest hazard. *Gul. Laurembergius* his History of a person cured of a great Stone by the use of Sows; and *Horatius Augenus* his History of another Patient are well known. But such examples establish no rule: they onely convince men of the possibility, which we do not deny: Several circumstances also cannot be known, as whether these were onely gravelly coagulations, and not flinty. In this therefore, or the like case, I can approve of no sort of true Diureticks, if the Stone be great, hard, and like a flint; for neither thus can we hinder its increase. The distance of the place is far, and the ways by which the Medicines pass, many; if they be weak, they lose their virtue before they come at the Urinary passages; if strong, they carry matter from the whole Body to the Bladder; nay, these doe more hurt, for by their acrimony and tenuity they take away, and wash off that Lentor and phlegmy matter, that like Mucus usually sticks to the Stone, and serves it for a bed: this gone, the Stone is made sharper, raises more intense pains, and hurts the Bladder more. A Patient of mine experienced this, who having used Diureticks for two years, found no benefit, whether he took Chymical or Galenical things, nay, he rather daily found more pain. *Crato*, Physician to three Emperours experienced the same, who seriously dissuades men in the pain of the Kidneys from those Diureticks, that force the Stone. His Eminence Cardinal *Cornarius*, when he had a fit of the Stone, and was afflicted with difficulty of Urine, being unwilling to observe the Dissuasion of his Physicians, went (contrary to *Mercurialis* his advice) to the Bathes that work by Urine, when he took the Waters his pain increased, and he died. *Guarinius* saith, *Conf.* 300. That scarce ever any one saw the Stone broken by Medicines. Yet I broke the Stone in the Bladder of a Boy twelve years old, and brought it away piece-meal by this one Medicine; Take of purple Violet Seeds half an ounce, of Water of Strawberry, Rest-harrow, Alkekeengi, each what is sufficient; make an emulsion according to *Art. rios.* an. 76. Add of prepared Sows 1 drachm, Goats Bloud 2 pounds, Species Lithontriptic. 1 Scruple, Spirit of Turpentine half a scruple, mix them, let 2 Spoonfulls be given frequently. He voided pretty large pieces, and inclining to blackness, so that one shell seemed to have grown over another.

II. *Mercatus* makes four Classes of Medicines that break the Stone, and he reckons those in the third, that he thinks do improperly break the Stone, and he saith, they doe good onely by absterging and rubbing the surface of the Stone. And he teacheth that all are such, which by their asperity absterge, and as it were rub, for when two rough bodies rub one against the other, they wear: Hither belong the *Lapis Spongæ*, *Lyncis*, powder of burnt Eggshells, &c. Some do reject the use of such things, because it is scarce likely, they should break the Stone in the Bladder, and not hurt the intermediate parts: But we must observe, that such things are not given whole, but reduced into subtil powder, yea dissolved and reduced into Magisteries, where their efficacy does as much depend upon their Saline Spirit which gets into the Stone, and dissolves it into Atomes; just as Metals and Minerals are dissolved in *Aqua fortis*, and Coral, Pearl and the like in Vinegar.

Sennertus. gar. For which reason the use of such Medicines should not be neglected.

III. All things premised that should be premised, we must of necessity come to some effectual Diuretick, that may be able not onely to cleanse and wash the Reins, but to run to the Bladder also, that it may make the Stone to move and swim as it were in the hollow thereof, that so it may more easily come to the neck, and either be forced out, or taken out with an Instrument by a skilfull Chirurgion. Neither let *Avicenna*, nor the advice of almost all Physicians, deter you from this work, because forsooth the use of Diureticks must wholly be avoided in the Stone of the Bladder, by reason they deprive it of its mucilaginous coat, and therefore may cause more cruel and bitter Pains. Indeed the Objection might have place, if the Debate were about prevention, which requires diversion from the Bladder: but while we are treating of the Cure, that is, of discharging a Stone, that is as yet but small, Diureticks, yea the stronger sort, are requisite, before it be so large that it can get no more into the Neck of the Bladder, much less pass the *Urethra*.

Fortis, consuit. 13. cent. 4.

IV. Some are of opinion, and that not without reason, that the Stone may be broken with liquours injected by a *Catheter* into the Bladder. For seeing these liquours are nothing altered, nor lose any thing of their virtue in their passage, as Medicines which are taken at the mouth do; but that they reach the Stone in the Bladder, they may exert their whole virtue upon it. You may try the virtue of such liquours without the Body of Man, upon some Stone that hath been cut out or voided from the Bladder. *Gardan* requires these Conditions in such Waters, that they break the Stone, and doe no harm to the Bladder: And he commends a Water made of the Ashes of Scorpions, Parsly, Roots, of Butchers-broom, Crabs-eyes, Pigeons-dung, Pellitory of the Wall; and he had rather have it made of many things mixt together, than of one Simple. ¶ *Rolsincius*, *conf.* 3. l. 9. intimates that they are Cheats, who boast of any thing they have done by Injection with a Siphon. ¶ *Zecchini* judges such Injections are to no purpose.

Sennertus.

V. I knew a person that was for a whole year and a half treated by his Physicians as one that had the Stone, because he had the Pathognomick signs, a Weight or Load about the *Pubes*, Strangury, Disury, Falling out of the Arse-gut, Itching of the *Glans*, &c. He takes a Journey into *France*, intending to commit himself to a Lithotomist. When he had been at *Paris* two months, and drunk strong Wine, in the third month, and for forty weeks, he voided by Urine a great deal of clayish matter: And from that time he was very well, nor felt he the least of it any more; only he ever after used a Diuretick drink, i. e. small Wines.

Ph. Salmuth. cent. 1. observ. 25.

Riolanus, Antropogr. lib. 2. c. 24.

VI. A bad conformation of the Bladder is very rare, yet it may be; and you must carefully observe in searching for the Stone, if, when all the Pathognomick signs are there, you cannot find it with your *Catheter*. For in some a double Bladder hath been found, in others it hath been divided by a Membranous Partition.

Schellingr. ad l. 1. c. 50. Holler.

VII. We are often deceived by the Likeness of the Stone, as in a Nobleman, who, after he had been tormented with his Urine eight months, the Physicians and Chirurgions doubting whether there was not a Stone, having used Medicines to no purpose, was cut for the Stone, as Lithotomists use to doe. He was eased of his pain; yet they found no Stone, but Flesh in the Neck of his Bladder, which by degrees was consumed with convenient Medicines.

VIII. Within the *Urethra*, upon the Caruncle, that closes the Extremities of the *Vasa ejaculatoria*, you will find a thin Membrane circumtended like a Valve, at the orifice of the Neck of the Bladder, which hinders the reflux of the seminal humour into the Bladder, and that no drops of Seed hang about

those places. You must have a care, when you put in your Probe, that this Membrane be not torn; for it is easily broke by putting a *Catheter* into the Bladder, or a Wax-candle for the cure of a Caruncle.

Riolanus, Antropogr. lib. 2. cap. 27.

IX. When a Stone grows to the Bladder it is very hurtfull, for whether you take it away or leave it, you either way kill the Patient. I saw an example of such a dangerous Accretion in a dead body, whose bladder contained a Stone wrapped in a Membrane, and so close knit with Fibres to the coat of the bladder, that I could scarce pull it thence without tearing of it. ¶ As a Lithotomist was taking the Stone from a poor Wretch, he pulled out bladder and all; for it was so grown to the Stone by so many and so strong bands, that no skill was able to separate it. Let Lithotomists here consider how easily the Wax-candle may deceive them, and how little they ought to trust to the putting in of an Iron Probe: for a resisting Hardness is an infallible token to them that there is a Stone: But the Stone wrapt in its coat, neither resists the touch nor struck upon gives any sound, wherefore they must not trust to these experiments alone, but should call other Signs to their assistance. But what shall the Lithotomist doe, when he hath found such a Stone, cut the *Urethra*, and laid the neck of the bladder open, as it should be? Shall he take it out or leave it there? He must take it if it will come, he must leave it, if there be reluctancy. Nor indeed do all, that are inclosed in a coat, grow to the bladder, but some of them fluctuate freely hither and thither, and come out as easily as if they had not been covered with any Membrane at all which I saw in two Women. But if the bladder be ill conformed, whether for a membranous partition that divides it, which *C. Bauhinus* observed; or an *Ectophysis* sticking to it, as in the famous *Casaubon*; or for its complicated Membranes growing closer to the *os pubis* than that Section can be made without evident hurt to the bladder, such a position of this part as I once indeed observed in one that was designed to be cut, then there is no less need of circumpection, as one may see in the example here instanced, upon whom the Lithotomist had certainly done his office little to his own credit, had he not, being frightened with this perverse situation of the bladder, in prudence desisted: for this Stone was implicated in so perplexed an error within the contorted bladder, that (as Anatomy informed me) *Æsculapius* himself could not have got it out without manifest danger of life. ¶ One man's bladder contained two encompassed so close by its corrugated coats, that it was scarce capable of an ounce of liquor besides them.

Nic. Tulpæ lib. 3. observ. 5. & 6.

X. Although Stones that stick and are fixt, can hardly be pulled away, and the greater number of these that are troubled with such do dye; yet the Cure is not impossible, seeing it is observed daily that several such have recovered: amongst which I saw one, from whom a two ounce Stone was taken, inclosed in a bag, which rarely happens.

Adgenius, Epist. 2. l. 4.

XI. Many Errors are wont to be committed by vulgar Lithotomists in taking out the Stone; the First is, When they allow the Patient the days next preceding, and in the whole course of his Cure to live as he list, neither premitting Diet nor Preparation, whence many Inconveniences and Death do follow, for all things run from a plethorick and cacoymick Body to the place affected: Therefore let Diet, Preparation and Purging go before, &c. 2. They think they have done the business, when before cutting they have purged their Patient with Antimony, *Mercurius vitæ*, &c. But these violent things debilitate the Strength and native Heat; whence the Patient often dies after the operation. 3. Some for a few days before the operation give a full draught of a decoction of Rest-harrow-roots or Millet-seed morning and evening, to bring the Stone to the neck of the bladder; but many mischiefs flow from

Fabricius
Hild. c. 23.
de Lithot.

from thence, for much humours are carried from the whole to the urinary passages, whence follow after cutting dangerous Symptoms, Inflammation, Gangreen, Convulsion and Death. Wherefore onely gentle purgative Potions must be given, because if Lenitives do purge also by Urine, how much more will strong Purgers, which have also a diuretick virtue, do it?

XII. Lithotomists, when they have got out the Stone, often commit many Errors, which want rectifying. Some think the Wound should be drawn together with one Suture or two, that it may the sooner heal: but they do ill, 1. Because a Tent cannot be put in as it should, nor the blood gathered in the bladder (whence come many Symptoms) be got out: 2. It is known that after the Stone is got out, there often remains Gravel, Phlegm, clotted Blood and Matter, which not taken out doe much hurt. 3. Suppose there be no such things; yet it is certain that the bladder afflicted so long, does crave time to purge out the gross and viscid Phlegm, that it daily breeds; but this must needs be done by the open Wound; for seeing the urinary passage is long and turning, therefore it cannot be voided that way, especially when the expulsive faculty is weak. II. Many Lithotomists immediately after the operation clap the Patient in a Semitecupe (in which they boil indeed appropriate herbs) and keep him there half an hour for the easing of his pain, and heating his body which was cooled by cutting: But so there is imminent danger of an hæmorrhage (the Vessels being opened) which is attended with fainting and weakness, and is one cause of Death after operation. Thus they offend against Aphorism 5. 23. Then after bathing much Vapours ascend, another cause of fainting: It is the property of the Bath also to draw, whence a great quantity of humours is drawn down in a manner violently from the parts above, from the Loins especially, which were stirred by the operation, and other Symptoms follow, all the ways and passages being loosened by using the Bath; so that all the excrementitious humours flow to that Wound, and hinder the healing of it. III. Some Lithotomists reject the use of Tents, and doe all their endeavour to heal it quickly: The Physician indeed should cure quickly, but safely also; now there is no safety, unless the Wound be kept open by the help of Tents, for some days after cutting; and the bladder be cleared of gravel and phlegm, which would grow together again by reason of the heat and inflammation left in the bladder; whereupon the latter Evil is worse than the first; for a Gangreen doth easily follow. IV. The Error of a renowned Chirurgion must be remarked, who writes, that 'tis sufficient when the Stone is taken out, if the Wound be closed with clean Lint, for the Urine is enough to heal the Wound by its detersion and consolidation, wherein it excels, if so be (he adds) that no symptoms supervene. And he says well, for how will you obviate the Symptoms, Pain, Swelling, Inflammations, &c. which usually follow Wounds joined with contusion? But if you would prevent them and Death that would otherwise certainly follow, keep the Wound open with Tents, which would otherwise so close with the swelling, that neither Urine nor the viscid humours, blood nor matter that remained after cutting, can run out: Besides, Urine cannot serve the turn of a Medicine, when it has got an acrimony and corrosive faculty from pain and a preternatural febrile heat. They that have tried it know that Urine retained is the chief cause of the Symptoms which usually follow cutting for the Stone: therefore a prudent Chirurgion will provide it an easie passage, by the help of Pipes and Tents. V. Nor is their error less, who make it their business by frequent traumatick Potions to cleanse the Bladder of Impurities, Phlegm, Gravel, &c. expecting hence a perfect Cure of the Wound: But who can believe that these can pass to the Bladder, or bring any be-

nefit, when Diureticks (though endued with subtile parts) cannot, according to *Galen, Art. Med. c. 96.* penetrate thither? VI. There are some who presently after the operation give a little Powder in a Glas of Wine as a singular help, and not in the beginning onely, but in the whole course of the Cure, hoping from thence for an abatement of Pain, a Repulse of the afflux of humours, stopping of blood and suppuration: But Wine, that is hot and sharp by nature will not stop a flux of blood, for which work cold and dry Medicines are requisite: and it will not assuage Pain, nor promote Suppuration, as being hot, it rather being fit by its acrimony to enrage than appease a Wound, which office is onely granted to hot and moist things, and those void of all acrimony.

XIII. Authours propose three places, by which the Stone may be taken out; 1. The orifice of the Bladder (as is usual in Women) by which *Alpinus* testifies, *lib. 3. cap. 4.* that in *Egypt* he hath seen a Stone taken from Men, the *Urethra* being dilated by blowing. 2. That part of the *Hypogastrium* that we call *Pubes* in a larger acceptation; which place *Roussetus, lib. de Partu casu. c. 7.* proves to be commodious and to be preferred before the rest, after he had heard how it once happily succeeded with *Pet. Frantoni*, who notwithstanding does not himself approve of this way. 3. The ordinary place, and that which is received hitherto by all Men, in Men and Boys is the *Perineum*. But *Mr. Collet*, a Lithotomist of *Paris*, descended from a Family of Lithotomists, uses the great Apparatus, whatever age the Patient be of, because he thinks, by thrusting the fingers into the *Anus*, and also by the violent squeezing down of the belly (which according to the old method they used in Children) that not onely great pain was caused, but besides that, an Inflammation and Gangreen of the said parts. They testify as much, who have at any time had the experience of a search for the Stone by the fingers thrust into the *Anus*; for they plainly declare, that neither the cutting, nor taking out the Stone put them to so much pain as the Search did. How much more must this hold true in Children, in whom these parts are exceeding tender and frail?

XIV. Cutting for the Stone may by no means be performed while the Moon is in *Scorpio* (according to *Ptolemy's* rule in *Centilog. c. 20.* Do not cut any part with an Instrument, while the Moon is in the Sign, under whose dominion that part is,) as among others it happened to a Religious Person, who being cut at this time died. For seeing at that time the Moon doth fill the *Pudenda* and Parts adjoining with her great Humidity, which being placed below are forced to receive the flood from above; certainly if they be cut, they will easily be obnoxious to putrefaction, and death must attend them.

XV. In the beginning of August, Anno 1675. *Franc. Sabourin*, a *Poitevin*, a skilfull Chirurgion in *Geneva*, committed himself to Lithotomy. Some months before, he had gone to *St. Claude*, to which Town the way is very rugged through Rocks and uneven ways, whereby his Reins grew hot, and the first occasion of his illness sprung; for upon this he voided Gravel and had tokens of a Stone being bred in his Bladder. Upon his own proper motion he drank the Waters called *Vicomitenses* for three weeks, whereupon the heat of his Kidneys abated, but the Stone in his Bladder began to torment him more, to wit, the mucus being wiped off which inwrapped it, and rendred it less troublesome. Out of mere impatience he called from *Lions* a most experienced Lithotomist, *Labutte* by name, and joined with him *Messeneau*, a most skilfull Chirurgion. The Lithotomist falls to his work; but first foretold the danger because of the season, although no Heat had troubled us that whole year, and the Sun seemed every where as if he had forgot his Office; witness the Harvest protracted to the latter end of August, and the Vintage to November. The Operation suc-

Hildand.

J. Van Horne,
Microtech.
p. 131.

D. Panarolus,
Pom. 3.
obs. 11.

on succeeded well enough, for presently a ragged Stone as big as a Pigeon's egg in shape of an Almond appeared, and was taken out without violence: Death notwithstanding followed on the seventh day (a Gangrene arising in the *Perinæum* and *Scrotum*) and it was ascribed to that unlucky Star. Which indeed I do not deny; but I think the greatest part of his Fate must be ascribed to the ease coming out of the Stone, by reason less blood came from the Wound, than the condition of the Patient, who was a plethorick Man, required. For presently, as the Operation was over, an astringent Cataplasin, according to custome applied, did repell the blood inwards which was found in the Bladder clotted and black, in great quantity, whence a Mortification was brought upon the neighbouring parts.

XVI. In these times the most usual way of taking out the Stone among vulgar Lithotomists is by that they call *Apparatus parvus*. When the Patient is bound as he should be, the Chirurgion puts the middle finger of the left hand into his *anus*, and with his right hand presses his lower Belly down towards his Bladder. Yet his Belly is not to be squeezed with a bare hand, but he must hold a soft Cloth several times doubled in his hand, or some Tow: because when the Belly is this way pressed by the hand, the Muscles oftentimes happen to be hurt and bruised, upon which Pain, Swelling, Inflammation, &c. do follow. When therefore he hath found the Stone with his finger put into the *anus*, he thrusts it to the Neck of the Bladder, then he makes his Incision upon the Stone, and with his fingers put into the *anus* he endeavours to force it out: which indeed in some, especially when the Stone is small, succeeds well; if not, they get the rest out with hooks. How dangerous this Operation is, any wise man may gather, when he considers, that in performing it, the Chirurgion may easily cut through the parts adjoining to the Neck of the Bladder, or the Neck it self; yea, and sometimes, the very Muscle of the Bladder; whence proceeds, 1. A great Hæmorrhage, by reason of a multitude of Veins meeting in the place, and raising a dangerous flux of blood. Then it is to be feared, the Patient cannot hold his Urine, or that a *fistula* remain in the part affected. It is observed also that in this operation the Bladder it self, because when evacuated, it falls within it self, yea, and the *Intestinum rectum* likewise have been both wounded, and so cut, that the Lithotomist (as *Peter Franc* observes) hath hurt his own finger with his Knife, and then the Urine came through the *Intestinum rectum*, and on the contrary the Ordure through the Wound. Therefore though this way was used by some of the Ancients; yet I would persuade the Operatour to find a more careful way. ¶ However I saw it twice successfully performed upon the self same Boy, by Mr. *Covillard* of *Monte-limar*, a most expert Lithotomist. He, anno 1655. took out a Stone as big as a Pigeon's egg, in a very short space of time, so that the whole Operation was over before you could say a *Pater noster*. The next year the same Boy relapsed into the same illness, by reason of a Petrified *minera* remaining in his Kidneys. This experienced Chirurgion, putting his finger into his *anus*, told them there lay nine Stones in the Bladder; he gathered them on a heap to the place designed for Section, which lying under the Knife, when the Incision was made, came out in the aforesaid number, some as big as Beans, others as Pease. But the Boy, through the calculous disposition in his Reins and Bladder, died consumptive the year following.

XVII. The Operation in a Patient, of a good habit of Body otherwise, and in perfect strength, if he fall into skilfull hands, is ever very safe, on this condition, that the Incision be rather too large than too little, when one is not certain of the bigness of the Stone: for if it be too little, the parts are

torn in getting out the Stone, and so an Ulcer arising, a Fever sometimes hastens the man's End.

XVIII. I would have Physicians know, that the outer extremity of the Neck of the Bladder does not appear in the same place in all Women: For it is seen inmost under the *Nympha*, above the outer straits of the neck of the Womb, few have it lye inwards in the upper part of the *pudendum*. Therefore there is a necessity to dilate it, whenever you would put ought into it. And it is worth the while to consider, that this passage, and the whole neck to the bladder may very well be so stretched by a dilating Instrument, as to admit ones Thumb without difficulty; if perchance a Stone should pitch there, or that so great dilatation should be requisite on any other necessary occasion.

XIX. It is certain that the Stone grows in Women as well as Men. A certain Nun could not make water for 12 days, the passage of her Urine being stoppt by a Stone, where also there was a confluence of much water. Wherefore when this mischief could neither be conquered by the Brass-pipe nor Medicines, I bethought my self of a course, unusual indeed, but very opportune. I cast a hook upon the Stone, lest it should slip back into the Bladder; then with a piece of Iron blunt at the end, I struck upon the Stone, till at several blows it broke into pieces, and then with what care I could, not to hurt any thing inwardly, I drew out both the hook and the Iron, upon which both the Urine and the Stones being voided, she presently recovered.

XX. When a small stone, forced out of the Bladder into the *Urethra*, stops the passage of the Urine, it may be taken out three ways, by a Knife, a Hook, and Suction. *Hildanus* advises to spare the Knife, as much as may be, because a hard Scar always remains in the cut place, hindring the dilatation of the urinary passage, whereby also there will be an interception of the Stone that is bred afterwards, which requires a new Incision there or very near it; which Wound is often followed by a *Fistula*. But if the Stone stick near the *Glans*, you may cut without fear, because in the fleshy end of the Member a less and softer Scar doth succeed, than in the middle duct of the Membranes. Whether notwithstanding we must proceed, unless Diureticks, mollient Potions, and sitting in a loosening Bath, have been ineffectual. From the Hook there is danger of scratching the smooth coat of the *Urethra*, instead whereof you may use the *parva terebra* of *Paræus*, l. 17. c. 40. or *Hildanus* his *tenaculum*. Stones, in *Tulpius* his opinion, though never so ragged, may most safely be got out by Suction, although *Hildanus* disapprove of it, because thus the Bladder's passage is rather contracted than dilated, and store of humours and blood is drawn to the *Penis*, whereby the Evil is increased. There is a fourth way invented by the *Egyptians*, of which *Alpinus* treats, de *Med. Egypt.* lib. 3. cap. 14. It is the blowing up of a man's yard with ones breath, the part next the belly being tied strait, so the *Urethra* being dilated, there is a passage open for the Stone, if it be a little one; for a great one sticks. Sometimes it is got out onely by the help of a *Catheter*; a trial whereof (saith *Tulpius*) when a Lithotomist was about to make not long since, with it alone he brought a Stone out of the Bladder, as big as an Olive Stone, more than half way the *Urethra*: where when it stuck fast, he happily got it out by help of an Incision made underneath.

XXI. The Stone, if it be a little one, is more difficultly got out of Men than Women: Yet no violence must be offered, because the Bladder is a sensible part, as also are the Privities, which when much afflicted raise Convulsions and mortal Inflammations. As it happened to *Vetus*, who when he had a Stone pitched in the passage of his yard, he got it drawn out with great violence and trouble.

Silvaticus,
conf. 59.
cent. 3.

Wierus, de
seru. p. 95.

Ant. Ben-
ven.

Hildanus,
lib. de *Litho-*
tom. cap. 13.

Hereupon his lacerated Member conceived an Inflammation and Mortification, whereof he died. This operation may be tried, when the Stone is small and will pass with ease; if it will not come away so, you may proceed to cutting.

XXII. We meet with another way of getting out the Stone. The Chirurgion, with his fingers put into the anus drives the Stone to the fore part of the belly, then by a hole cut in the *Musculus rectus*, according to the duct of the Fibres, above the *Os pubis*, he takes out the Stone by the help of a Pair of Nippers. If the operation be performed this way, a dribbling of Urine need never be feared; and besides, a larger space is allowed to take out the Stone. But in the mean time this operation is in itself dangerous and troublesome; for if the Lips of the Wound made in the Bladder be not united to the Muscles of the Abdomen, an Exulceration of the Bladder follows, which does not onely create notable Pain, but is esteemed more incurable than the Stone it self. ¶ *Roussetus* out of one *Franc* commends Cutting for the Stone in the Groin, whence it is called the *Franconian Cutting*, in Children especially. Nor is *Hildanus* averse to it in larger Stones, which cannot be brought to the *Perineum*; for it is taken out there with less pain and danger of an Hæmorrhagy. The healing of the Bladder need not fright a Man, because it hath carnosus Fibres, by the benefit whereof its innate Heat is cherished and its Wounds cured. There are several examples of a wounded Bladder being happily cured. And since the very Stomach and Womb may be wounded and cured without damage, what danger there can lye in this Cutting of the Bladder I do not see, so that an expert hand undertake it.

XXIII. In very old Men, who labour of a most cruel Dylury from a great Stone, that cannot be taken out without manifest peril of Life, that we may alleviate the miseries of Life, we cut the *Perineum* after the same manner as is usual in taking out the Stone, and keep open the hole with a little Pipe. As long as Life is prolonged, the Pipe is stopped with a Cork, and a Sponge is applied to receive what drops, if there be any thing. When they have a great desire to piss, they pull out the Cork, then put it in again, and so the torment of Micturition in persons troubled with the Stone is mitigated.

XXIV. If Stones must be cut out of the *Urethra*, and can be got out no way else, they are to be held fast with the fingers both above and below, nor after the Wound is made must they be let go, till the Stones start out, or be taken out with a pair of Pliers: For if they be let go, the Wound of the *Urethra* is so hid by the Skin that covers it, that it cannot be found again, by reason of the convex superficies of the *Urethra*, and the lax Skin over it.

Medicines especially made use of by eminent Physicians.

Don. ab Al-
tomari. 10.

1. *Alexander* approved of Kid's or Goat's blood applied hot outwardly as an effectual Remedy invented and proved by long time and experience; but far more, if you smear it in a hot Bath often and at certain Intervals.

Horat. Au-
genius.

2. A most excellent Remedy to break the Stone; Take of *Millepedes* prepared 1 drachm, *Aqua vita* half an ounce, Broth of red Chich-pease 9 or 10 ounces. Drink it warm an hour before Dinner.

Job. Baveri-
us, cons. 4.

3. *Petroleum*, wherein *Lapis Lyncis* hath been boiled, strained and injected by a Syringe, wonderfully breaks the Stone in the Bladder, the yard being about that instant embrocated with a decoction of Mallows.

4. I made use of this Medicine in my self for the Stone in the Bladder. Take of prepared Sows, Sponge of Wild-rose-tree, Seeds of Purple-violets, each 1 ounce, *Spec. Lithontript.* 2. drachms. Make

an Antidote. Two drachms of this were taken in 10 ounces of diuretick decoction, and 2 drachms of Spirit of Juniper. I took this at five by the clock every morning for some time: and a little after great store of reddish Urine came away with Flakes in it like Fishes scales, which was the coat or crust loosened from a larger Stone; by the continual use of this I was freed from the Stone. ¶ This is a noble and royal Nephritick liquor communicated to me by an illustrious Prince, of which *Paracelsus* in his Book *de Tartaro* makes mention, though but obscurely. Take of White-tartar powdered, dissolve it into liquor in a Glass in a Cellar, which hardened again, at the fire must be calcined and powdered. Take of this Powder 1 ounce, pour to it Parsly-water 2 pounds, mix them, and let them stand till the Powder be dissolved, which done, let it be filtered twice or thrice through a Paper, that it may become a clear and pellucid liquor, which with Chips of Orange-pill cast into it, is tinged into a Citrine colour, and kept for use. The Dose is 1 spoonfull in 5 or 6 ounces of White-wine, with which I use to give some Strawberry-water.

Guilhelmus
Laurember-
gus, de calc.
p. 17.

5. This is a Secret in the Stone; Take of Whites of Eggs boiled in Water, mix them with Oil of Nard and Maltick, add of the Powder of *Lapis Judaicus*, half a drachm ground fine upon a Flint, with a Decoction of Millet and a little Cummin. Take a little of it strained morning and evening. Several have been cured by this when they could find no benefit by other Medicines.

Maroldus,
Pract. Med.
p. 249.

6. A certain Physician told me, he had cured several after this manner. He took a Hare with young, he cast away all the Inwards, then he filled the belly with the Dam's blood and burnt it to Powder in a new Pot, of which with as much Sugar he gave a little in a Spoon, in a short time the Patient voided the Stone in little pieces by his yard. ¶ A certain experienced Man took a Hare, and casting away the Inwards, he filled the Belly with the Skin, Saxifrage, Millet, *Lapis Lyncis*, *Lapis Judaicus*, *Lapis Spongia*, Cinque-foil and Goldenrod, and burnt it to Powder in a new Pot: The Dose was 1 spoonfull, with a little Wine, or the like, every day; it broke, and forced away the Stone in the Kidneys and Bladder.

Arn. Villa-
novan, Brev.
l. 2. c. 32.

Cancer, or A Canker.

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I. A Canker can difficultly be discerned from a Scirrhus, except thus, that is, If you lay some lenient and emollient Medicine upon the Tumour, and after two or three hours if you see it either diminished or quite gone, there is no suspicion of a Canker: But if the Swelling abate not, but grow into a Spongy substance, it is for certain a Canker.

Walrus,
Meth. med.
p. 21.

II. It is observed, that there is a double poison in a Canker, one Putrefactive, another Corrosive. If you apply hot and moist Medicines (which use to promote pus in Imposthumes and Ulcers, that are capable of ripening) then it will degenerate into deep Putrefaction, and will corrupt all near it with Rottenness: But if you would correct this foulness by Causticks, the other Poison that in Cankers is Corrosive will rise and burn all things near it.

Hernius,
com. ad aph.
38. Sect. 6.

¶ A Matron that had passed her 50th year, her Menfes leaving her, was taken with a Swelling in her right Pap, at the first hard and without pain: Some years after, when it increased and caused pain, she made use of a Surgeon, who, when he had applied Emollients and Suppuraters for almost a Month, as the pain increased by degrees, the Swelling broke, which presently turned into a malignant, painfull and foetid Ulcer, which at length proved mortal.

Hildanus,
cent. 3. obs.
89.

¶ An occult Canker often lies hid a long time without any harm, but when provoked, it eats the skin: And when that is open, either of it self, or by the unskilfulness of him that hath it in hand, ever after it will be kept within no bounds, but like a ravenous wild Beast devours whatever comes in its way. And by how much the more freely the vapour contained in it exhales, by so much the more violently doth the humour flow likewise, which will encrease the Swelling: into whose intimacy, if the circumstuous Air, which was excluded before by its coats, do indeed penetrate, presently there follows both a greater putrefaction, and a more luxuriant rankness in the part affected: which, if you do but endeavour to hinder, either by Instrument or sharp Medicines, you do but twist ropes of Sand. The Daughter of Geropius Becanus carried in her left Temple, for above Fifty years, a hard and uneven Carcinoma, but without an Ulcer, or any great harm: however, the pain and itching, by little and little encreasing, she imprudently applied to the Tumour, I know not what Caustick Medicines, which corroding the Skin, it quickly degenerated into an Ulcerated Carcinoma.

Nic. Tulpius
lib. 1. obs.
47.

III. There scarce occurs any one disease this day in Surgery, about which greater errors are committed than in the Canker; Do you ask the cause? The Disease and the Essence thereof is not sufficiently clear to them; and in the Cure they too strictly observe that Axiome of Physicians, *Contraries are Medicines for their Contraries*. For when they see the Tumour very hard, they endeavour by Emollients and Resolvers (contrary to Galen's opinion) to amend that hardness; afterwards, when the Tumour is degenerated into an Ulcer, they consume the Lips that are hard, with Escharoticks and Corroders, they correct the filth and stink of the Ulcer with *Egyptiacum*, and such things, all which, how unreasonable and pernicious they are, many examples do shew.

Hild. cent. 6.
obs. 81.

IV. Carcinoma's, or Cankers, if they be cured to the bottom, can be cured no other way than, if they be Ulcerous ones, by burning; if not Ulcerous by cutting. For that there are some which may be cured, is evident from Hipp. lib. 7. Epid. about the Man that had a Carcinoma in his Jaws burnt, and was cured by him: And others, that neither can be cured, nor ought to be meddled with, appears from Celsus, because they are but provoked, and do in-

crease till they kill. And the difference lies not in the kind of the Disease, but in the Quality of the humour; for in the very several sorts of Melancholy some are sharper or milder than others. If therefore you perceive by any symptoms that a Man's Melancholy is so fowre, as that it is much irritated upon a slender occasion, perchance you must not dare to touch it: But if by other symptoms you perceive the Melancholick humour, that is in a Man, doth incline to an earthy or sanguine nature, you must try to burn it with Causticks; and then if the thing succeed well, you must proceed presently to fire, especially if the evil be in a part, which the disease can easily and speedily eat away, such as the Jaws: For in such cases, although you be not sufficiently ascertained whether the humour be able to bear this Remedy, you must try even with danger to burn it; because if the cure should be neglected, the disease might eat away the part, though coming of no ungentle Humour. Therefore you must try even with danger to cure a Disease, that would certainly kill.

Vallesius, l. 7.
E. id. p. 893.

V. Purging should rather be used in the beginning, according to the redundance of the Humours in the Body, if perchance the encrease of the Canker may be hindered by it, than that we should accommodate it onely to carry off Melancholick Humours, as they commonly doe, who think Melancholy to be the cause of it: which indeed (for a costive body may be better treated) can upon this account especially doe no good, because it cannot take away the cause of the Canker, that is poisonous besides. It is granted, that other poisons, as that which causeth the Pox, may be discharged the body by strong Purges often repeated, which it is not safe to doe in very weak bodies, that are troubled with the Canker, nor if it should be done, would doe any good.

Platerus,
Tom. 2. p. 704.

VI. Galen. 4. aph. 47. acknowledges he cured a Cancrous Tumour, that came in the breast of a certain Woman, by violently and often Purging her of black Choler in the Spring and Autumn. And by the like method of cure I also freed a certain Noble Countess of a Carcinoma in her Breast.

H. Montanus.

VII. We have no reason to question the repetition of Blood-letting again and again, for there is a fault in the Blood, upon its being vitiated the Tumour depends. And though a Cacochymy should rather be discharged by proper Purgers; yet when there was hot, exult and melancholick Blood in the whole, it ever pleased Galen, 3. de loc. affect. 7. & ad Glau. 11. and Hippocrates also, to abate its plenty by breathing a Vein; which is the more convenient, if heat and redness be perceived in the part, a token of the Fire's being onely kindled, and not that all is in ashes.

Forstis, con-
sul. 86.
cent. 4.

VIII. Cordials, especially those that resist poison, will doe more good in subduing the strength of this poison, than such as are accommodated to other humours; And these are the chief of those things that are given inward in this case, and should rather be used than vulnerary Potions; which nevertheless some, that they may try all things in a desperate disease, do prescribe in an Ulcerous Canker: And they most esteem of one that is made of a Decoction of Winter-green, and Ground Ivy in Wine, for the Canker in the Breast, and for all others.

Platerus.

IX. If in the part affected the peccant matter be but in a small quantity, then there is no inconvenience in strengthening the Part; because, when the Part is strengthened, that little which is left is easily dissolved by Nature. This Rule is gathered from Galen, 14. Meth. cap. 9. where he saith, *That in the beginning of a Canker the excrementitious humour, if it be but little, may be repelled to the principal parts; because unless it be suddenly repelled, the Melancholick humour does presently distend the veins, which when distended, the Canker is rendred incurable.* But that

Sanctorius
lib. de Rem.
Invent. c. 13.

that it is so, appears from *Galen*, 6 apb. 38. where he saith, the Roots of the Canker are Veins that are distended by melancholick Bloud, which unless it be removed, the Canker cannot be cured.

X. Sometime the Pain is most outrageous, which will not allow one to take any rest or sleep; wherefore we are often forced to have recourse to Narcotics, which, in this case, by reason of the intense heat of the humours, doe less harm. For once I saw a Woman, that laboured of a Canker in her Breast, who every night for four months took four or five grains of *Laudanum* without any hurt, and to her great comfort.

Riverius, praef. l. 15. c. 10.

Mauritius Cordus, in lib. 1. de morb. mulier. Hipp.

XI. A Noble Woman had all the right-side of her face, for a long time, beset with an Ulcerous Canker: She, after she had made use of several means prescribed by the Physicians of Italy, France, Germany and Spain, was at length eased by this common Barber-Surgeon's remedy; she cut young Chickens into thin and broad pieces, which she applied to the part affected, changing them often every day. Some use the Flesh of young Pigeons.

XII. Septicks, unless they be tamed by frequent washing in the juice of Purselain, Lemons, Nightshade, or Housleek, may not be applied to any Ulcer; and then they must be mixt in a small quantity with some gentle Unguent, and used onely to a part that is far from a principal one: for I have observed them, especially Arsenick, and sublimate in a greater quantity, and not tamed, applied to Ulcers near the heart, as to a Cancer in the Breast, that they once carried off a Woman in 6 days: About three hours after the Powder was srewed on her Breast, she, just as if she had swallowed it, was taken with a Shivering, then with a Vomiting, and frequent Faintings, with a languid Pulse; which symptomes encreasing by degrees, her extreme parts growing cold, and her Face and whole Body swelling beyond measure, she was miserably murdered. ¶ Have a care you do not use *Fredo's* Medicines for the Canker, for they consist of Arsenick: but that Arsenick is a destructive Medicine in cancerous affections, is certain. ¶ Therefore *Penotus* must not be haikened to, who, *lib. de vera prepar. et usu med. Chym.* extolls his Medicine made of Arsenick to the Skies: But he, good Man, was seduced by others, and never made trial of it himself; as neither did *Philippus Mullerus* of his, which he describes in *Mysteriis et Miraculis Chymicis*. The original of the Cheat and Error is from hence; Because *Theodorick* and *Lanfranc*, whom *Guido* follows, distinguished a Canker, into a Canker an Imposthume, and a Canker an Ulcer. The Canker an Imposthume is the disease so called by *Hippocrates*, *Galen*, *Avicenna*, and others, rational Physicians and Surgeons: But the Canker an Ulcer (so *Guido* calls it) is, when by reason of Ulcers or Wounds, irritated by sharp Medicines, bad melancholick humours become adust and troubled, and are drawn from the whole and parts adjoining to that place, where they putrefy, grow hot, and acquire an acrimony and poisonous quality, whence there is an encrease of the evil disposition, and it becomes a Canker: So *Guido*. But such Ulcers, though malignant, and oftentimes stubborn, are not yet Cankers, nor ought to be confounded with a Canker, whose Contumacy far surpasses the Malice of all Ulcers. Moreover in the Canker an Ulcer, or rather in bad and malignant Ulcers, I have known the Powder or *Arcanum* of the Physician of *Norimberg*, as also my *Escharotick* Unguent, to agree well with several; but in a true Canker neither of them can be used.

Fabricius Hildanus, cent. 6. obs. 82.

XIII. A plate of Lead smeared with Quicksilver is no contemptible Medicine for Cankers, that are not Ulcerous: for *Galen* testifies, that Lead is a very usefull Remedy for malignant and inveterate Ulcers: And that such Leaden Plates smeared with Quicksilver, are a kind of *Alexipharmack*, whereby the evil disposition of Malignant Ulcers is subdued and spent, when they elude the virtues of o-

ther remedies, *Guido* is witness. When this sort of Remedy was prescribed, the Lady M. for a Canker as big as a Walnut in her left breast, it's true, it did not cure her; yet it hindered the encrease of her illness. But growing weary of it, when she had committed her self to a certain Physician, who boldly promised her a speedy cure, she proved by the loss of her life, how dangerous the cure is, which is undertaken after the manner of other Ulcers: for when her Physician had thrown this Remedy out of doors, and applied remollient, heating and drawing things, the Swelling increased to such a bigness, that her breast, through mere distension, burst in the middle, whereupon an haemorrhagy arising, that could not be stoppt, the poor Lady expired in the Armes of her Physician.

Parvus, lib. 6. c. 30.

XIV. An occult Canker had invaded a Matron's right breast, after two years time it rose to a manifest Tumour. The Physician that was consulted ordered a Plate of Lead to be applied, and every other day to smear it lightly with Quicksilver; according to the example of *Galen*, *Guido*, *Parvus*, &c. But through the carelessness of those that lookt after her, the Plates did more harm than good. In the mean time the Canker encreased, and came to Suppuration; therefore the use of the Plate was laid aside. The Swelling broke of it self, and her torments ceased a little; but by and by they returned more violent and pungitive, the Canker encreasing in all its dimensions. It deserves admiration, that the Mercury which was formerly imbibed from the Plate, should drop so visibly, and in a pretty quantity out of the *Carcinoma*, which shaded the adjacent parts with its shining, nay, and sweat at the shoulders through the whole skin. I ordered a Plate of Gold (which Mercury uses to follow) to be applied, and a tent of Gold for the Ulcer.

Bartholinus, cent. 1. hij. 7.

XV. The Canker is taken away both by Medicines and the Knife. The Knife is better than Medicines; for eroding and sharp things cause pain, and this a greater flux of Humours. Yet the latter way of cure is sometimes proper; for erosion must be made in the Interstices of the Fingers, and in the Groin, because the tendons and membranes in these parts would make cutting very painfull. Among the caustick Medicines there is the *Holofericum Fernelii*, and Vinegar some use, that is better, the Ly of Sope boild up to a consistency: Arsenick, which pleases some, displeases me: Lest an Inflammation should be raised in the Neighbourhood, apply a defensive round about. Thus indeed a Canker may be taken away by Medicines; but it is better to cut it out with a Knife: This cutting is either speedy or slow. I saw a Canker so quickly cut from the Breast, that in the time of the operation I was scarce able to speak three words: But when a Canker is come to a great bigness, then this speedy cutting is not proper, for much good flesh is taken away, and a great hole is made, out of which the spirits can more freely pass, and thereby the Patient is more weakened. In this case, to recruit strength, Cataplasms steeped in Wine are applied: In less Cankers we may make the Section all at once, except in those of the Lips. But it must be all taken away; therefore first let the Operatour take the part affected, and these adjacent, in his fingers, and try well, whether all that is amiss may be taken away. A Canker once cut out doth often come again. 1. When all was not cut out, through timorousness, either in the Operatour, or in the Patient. 2. Because the Arteries that emit this vitious bloud, by reason the less Arteries are cut away from the part affected, must contain more bloud than before, and therefore when they are open, will discharge that bloud upon some other part, whence comes a new Canker. 3. Because there is so much malignity latent in the Body, that a Canker will always grow afresh. A Canker

Canker is easily cut out of the flesh; difficultly (but it may be done) out of a Membrane and Tendon, so that these parts be such as may be taken all away. For this reason, a Canker that possesses the intercostal Muscles, cannot be cut, because of the *Pleura*, that is joined to all the ribs. A Canker in the bone is most difficultly of all cut: Therefore this disease requires a Caustery. The dissection of the Canker must not be made at a great distance, as is the custom in a Gangrene; yea, if it may be done, we must cut off no good flesh.

Walrus,
meth. med.
p. 128.

Amatus,
cent. 3. curat.
32.

XVI. I have known some Women, who had Cankers in their breasts, that by a good order of life, without any trouble of Topical Medicines, lived a long time, as well as if they had been troubled with no Disease.

XVII. Although no peculiar Operation be owing to a Lip which is troubled with a Canker, other than what is due to a Canker in any other part, namely, the extirpation of the Disease, with the part it is in; yet let me caution young Operatours, that the way described by *Aquapendent*, to wit, to doe it with a sharp piece of Money, or hard Wood dipt now and then in *Aquafortis*, is by no means to be approved of; because the *Carcinoma* will be enraged by such a Liqueur.

Van Horne,
Microt. p.
120.

XVIII. I will add the observation of the excellent *Scultetus*, that a pair of Scissers is very incommo- dious to cut away part of the Lip, troubled with a Canker. The reason is, because something of the Ill is always left; whence it comes to pass, that it breaks out again, which he saith he observed twice in the same Subject.

Bartholinus,
cent. 1. Hist.
7.

XIX. I cured an old Man of 84, of an exulcerate Canker in his nether Lip. I cut it out by the roots with a sharp Incision Knife; the blood ran violently out, which, when I had let it run on purpose about ten ounces, I staunch'd, without any Sealing, only with a little burnt Cotton and Astringent Powders. After the use of Digesters good Matter ran out (a token that the whole substance of the Canker was taken away.) Afterwards with a Camphorate Ointment of Cerus made in a Leaden Mortar, I brought a Cicatrice in twenty days time. But three years after a new Canker arose in his Jaws, of which he shortly died, contrary to my own, and all mens expectation, when it was not likely at these years, that an adust, Melancholick Humour should breed again, and cause a new Canker in another place. I was confirmed in this opinion, because I had seen a Woman of 70, that had an Ulcerous Canker in her Nose, to whom I prescribed the same Ointment, rather to ease her pain, than to cure her, who yet, beyond all hope, in a month's time, was perfectly cured. I also cured a Man of 40 of an Ulcerated Canker, as big as a Pigeon's Egg in his nether Lip, after the same manner, i. e. by cutting; with the addition of preparation, and purging of the Melancholick Humours, and yet there arose no Canker in any other part of the body. So therefore sometimes we need not cast away all hope of curing those diseases.

P. Marchet-
ti, obs. 29,
p. 30.

XX. A Canker in the Breast is sometime occult, sometime Ulcerous and manifest: besides, the disease is sometime in one part, sometime the whole Breast is affected, yea, sometime it creeps farther, and gets into the Glands under the Arm-pits. Keep your hands off such, for the cure is in vain, as also experience shews that to be which promises a recovery by Medicines. Truly there is no cure here, but what is heteroclitie (as *Aquapendent* saith) that with the Disease taketh away also the part affected, which is the most usual operation. But *Hieronymus* is too scrupulous, in that he would first take away the pain, and hinder the profusion of blood: for the pain is but momentary, and only small Arteries are cut.

Van Horne,
Microt.
121.

XXI. In the operation, first of all two Needles, or a double Thread are drawn across through the

Breast: Yet the Patient is not always to be tormented with the double pain of crossing the Needles; sometimes the *Carcinoma* is onely taken hold on with the left hand, viz. when it is pretty moveable. After the same manner you may conveniently take away remarkable Wens or Cankers, that grow in any other part of the body.

Idem, p. 127.

XXII. And the vessels that are cut must not be feared, but Medicines which stop blood must be applied.

Idem, ibid.

XXIII. In Cankers of the Breast it seems as if we should prescribe Repellers, to intercept the greater flux of humours, if we observe the part affected to swell daily, this being a token of a continual afflux, that should be repelled another way; and the part affected must be strengthened with moderate astringents, that it may not be so liable to receive the flux of humours. On the other hand, we have *Hippocrates* his Rule, *It is better not to cure occult Cankers*. Nay, if according to *Galen*, evacuators be more convenient than repellents in the *Parotides*; lest the matter should be driven into the Brain; how much rather should we abstain from Repellers in a Cankrous Breast, that is so near the Heart? Wherefore it is my opinion, that if we were in the beginning of a Disease that is but coming, then we need not abstain from some of the weaker Repellers, mixt with weaker Digesters. For which purpose it is my custom to make use of Oil of Roses complete, beaten up in a leaden Mortar, with a leaden Pestil, to a moderate consistence: for by the benefit of this Liniment I have more than once conquered Cankers as they were beginning. But we may not proceed to the stronger Repellers, neither in the beginning, because if the Spongy substance of the Breasts be condensed, the blood has recourse to the Womb, where it breeds a Canker: nor in the progress of the disease, because they hasten exulceration.

XXIV. *Magius* being called to a certain Nobleman that had a Swelling in his right Breast, which they took for a Canker, judged it rather to be a *Phlegmone*, because it was of no long standing. First of all therefore he ripened this Swelling with Wheat-flower boiled (as *Galen* teaches) in Water and Oil, and when signs of its ripening appeared, he opened it with a Knife; which being done, good matter ran out. But before opening, he felt some palpitations within it, which also argued the Tumour to be no Canker. Then he used Digesters, as *Turpinus Schenckius*, fine mixt with the yolk of an Egg, and cured his Patient.

Medicines especially made use of by eminent Physicians.

1. I have often used this Unguent for the Canker with good success; Take of Unguent, *Diapompholyg.* 3 ounces, *Venice-Treacle* 1 ounce, *Saturn* calcined with Nitre, and washed in Plantain-Water 2 ounces, Juice of Herb *Robert*, as much as sufficeth, to the just consistency of an Unguent. Keep it for use.

G. Fabricius,
cent. 6. obs.
7.

2. An Unguent of green Frogs is very good for a Canker (see the preparation in *Sennertus*.) ¶ Also the Broth of Craw-fish boiled in Ases-Milk, drunk five days successively, and this course repeated seven times, composes the pain of a Canker in the Breast.

Hier. Fabri-
cius, Cibi-
urg. l. 1. p. 1.
c. 27.

3. There is a Salt made out of the *Caput mortuum* of the preparation of Spirit of Soot, that is a most excellent thing in an Ulcerated Canker. This Salt is drawn off with Vinegar, and in some cool place is dissolved into a Liqueur again, and with this Cankrous Ulcers are several times anointed; The poison is drawn out visibly like a steam: Then the Oil of Soot gently sprinkled upon it, and frequently, brings a crust over it like a skin, which falling off in five or six days time, shews that the Ulcer is healed.

Job. Hart-
mannus,
prax. chym.
p. 18.

A. Fabricius

4. Fabricius asserts from certain Experience, that the following Water is admirable in curing Ulcerous Cankers. It is made thus; Take sucking Puppies, put them in Wine, and distill it half off in Balneo; then take the Puppies out, and boil them in a sufficient quantity of Golden-Rod-Water, or in common Water with Golden-Rod in it; when the Decoction is made, add the Water that was distilled off the young Dogs, and boil them together till the flesh come from the bones. Then distill them all in Balneo. Keep the Water for use. Wet dry clothes or rags in this, and apply it to the Ulcerous Carcinoma: For upon certain experience it heals the sore by cleansing and drying. I should add in the Decoction Leaves of Burnet, *Carduus Benedictus*, and Ash, which are commended by all Men for the Canker. ¶ This is one Man's Secret; Take of Quick-Lime wrought up thick with Honey, and burnt to powder in an Earthen Pot, and powdered, 3 drachms, Vitriol, Alum, Orpiment, Verdigrease, Sal-Gem, each half a drachm. Make a Powder, strow it on, and it cures the Canker.

De Heredia,
de morb. mul.
p. 229.

Idem, p. 240.

Pocettus,
Chirurg. l. 1.
c. 30.

Idem, ibid.

Prævotius,
med. pauper.
p. 182.
Id. p. 100.

Phil. Salern.
thos. obs.
cent. 2. p.
71.

Idem, p. 100.

Vigerius
oper. chi-
rurg. l. 1. c.
25.

5. The powder of a Milstone, or the Clayey Ruff that comes from a Grindstone, when you grind Tools upon it, applied either by it self, or mixt with Oil of Myrtle, and with the Juice of Nightshade, or Plantain, anointed upon the place is good to strengthen it after the cure of the Canker. ¶ The Oil of Eggs, rubbed in a Leaden Mortar till it grow thick, doth operate powerfully in easing the pain, palliating a cure in an Ulcerous Canker.

6. The Head of a Puppy a month old cut off and dried and powdered, mixt with Honey, and laid on an Ulcerous Canker, is said to kill it; or, wash it with Ivy-water, and then lay Ivy-Leaves upon it. ¶ Oil of Olives, with the Flowers of Wheat gathered in the Spring, set in the Sun for several days, is good to anoint an Ulcerous Canker. A Country fellow did stupendous things with this.

7. Mother of Time, black Hellebore, Fumitory, and things compounded of them, as *Pilula de Fumaria*, *Confectio Hamech*, &c. are especially commended for evacuating black Choler. ¶ The Fish of boiled Cockles, and Crawfish is good to ease the pain. But there is an Oil distilled from green Frogs per descensum, which is excellent both to give ease, and cure the Canker. ¶ Lead is highly commended by all men: Therefore all Medicines for this Disease are most conveniently prepared in a Leaden Mortar, with a Leaden Pestil. An Ointment of Lead may be made thus; if two thick Plates of Lead have Oil of Roses poured on them, and rubbed so long one against the other, till it acquire the form of a Liniment.

8. In a Canker that was not Ulcerous I have often used this Repelling and digesting Medicine. Take of old Treacle 1 ounce, Juice of Crawfish, Lettuce, and Oil of Roses each 1 ounce, Yolks of Eggs roasted in Embers, N^o 2. Camphire half a drachm. Mix them together in a Leaden Mortar. Make an Unguent.

Capitis affectus in genere, Intemperies,

Or The Diseases of the Head in general, its Intemperature.

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Medicines.

I. Physicians do not all agree, what Vein should be opened in diseases of the Head; yet it is altogether necessary a distinction should be made; and we must take good notice what the Laws of Evacuation from the whole, what those of Revulsion and Evacuation from the part affected do require. For in the beginning of the Disease we must not have respect onely to the Head, but to the whole Body also, and to the part whence the flux of Blood comes; and we must so order Blood-letting that it may doe good and not hurt, that is, that we may hinder the blood from running to the Head. Therefore in the beginning such a Vein should be opened, as may both evacuate the abounding blood, and draw it from the Head; but we must by no means in the beginning open a Vein in the Head it self. But if the fullness come from the whole Body, we must bleed in the Arm: if abundance of blood, and the disease of the Head proceed from suppression of the *Menses*, or *Hæmorrhoids*, we must consider the quantity of the abounding blood, and the greatness of the Disease in the Head, that depends upon it: For if the quantity of blood be less, and the Disease will give truce, we may bleed in the foot first, and that several times, because these Veins make both Abatement and Revulsion. But since these Veins in the feet, as being small, do evacuate the blood but slowly, if there be a great quantity of it, and the Disease be violent, and therefore present help be required, we may first bleed in the Arm, and

Sennertus, l.
1. p. 1. c. 3.

and then take care to recover the course of Nature. At length, when the Body is evacuated; and the Flux ceased, if the Illness go not off, a Vein may be opened in the Head.

Riolanus,
Anthropogr.
in fine l. 6.

II. The Circulation of the Blood teaches, how we may succour the Head, when sick: For if the Blood ascend to the Brain only by the Carotides, and descend by the Jugulars, to bleed often in the Arm will doe good: And Cupping bloody and dry, frequently applied to the top of the Shoulders, the Neck and Poll, hard rubbing of the Limbs both above and below, will conduce to the revulsion and derivation from and evacuation of the part affected. ¶ But Experience shews, that opening the Saphena does better and sooner quiet several cephalick affections, especially the Head-ach, than any Vein in the Arm: Perhaps the Reason may be brought from the same Circulation of the Blood, because the mouths of the Arteries lye here more open to the Veins, the Blood that is drawn thence is of a more arterious nature: The same Reason may be given for the *Sabatella* in the Hands; of the Efficacy whereof no one doubts.

Martianus
comm. in
Hipp.

III. Hippocrates, 2. Epidem. Sect. 6. v. 36. proposes a Vomit, for taking away a fulness of the Head, whereby it is successfully and quickly purged: and those that vomit know as much, for when they vomit, great store of Humours run out at their Mouth, Eyes and Nose. Wherefore, 4. Aphor. 18. Diseases above the Diaphragm, that want Purging, signifie, they should be purged upwards. And, lib. de loc. v. 173. sect. 2. In a Defluxion from the Head a Vomit is good. Therefore farewell they, that are so fearfull of a Vomit in Diseases of the Head, and think the Head is stuffed the fuller by it: For although in the very act of Vomiting it seem to be a little filled, yet because such fulness is from Vapours, which, as soon as the Vomiting is over, do vanish, we cannot say, the Head is filled by Vomiting. ¶ Extraneous Ferments, wherever in the Body they be bred, and the deeper Seeds of Diseases, can never be got out without the use of Vomits: but Vomits are found very beneficial in the Diseases especially of the Brain and nervous kind: for by this sort of Physick not only the filth of the Stomach and Bowels, that corrupts the Chyle and Blood, is plentifully discharged; but the Glands likewise, which are planted in the Bowels for Emunctories of the Blood and nervous Juice, are squeezed out, the choledochal vessels, and other receptacles of Excrements are abundantly evacuated, inasmuch that these being emptied are more ready to receive the recrements and superfluities of either humour, that would otherwise be apt to overflow the Head.

Willis,
Pharm. rat.
cap. 2. sect. 2.

IV. Galen's advice, lib. 1. *κρίσις* must be observed; that in all Diseases of the Head, whatever humour be the cause, Medicines that purge Phlegm must be mixt with the rest.

V. Paulus, lib. 7. cap. 4. writes, that they who give a Purge at night or after meat, doe harm, the Food corrupting, and the Physick working less than it should: Reason seems to confirm this, for so concoction is interrupted, distribution of the Aliment vitiated, and the Physick works imperfectly, its purgative virtue being weakened by the Food: But Experience contradicts it, which shews, that Pills given after Supper do purge the Head very well, without the forementioned Inconveniences; as J. R. Saltzmannus declares, in Hildanus, cent. 3. obs. 72. I light (saith he) not long since on Damascenus, and upon that Aphorism of his, wherein he orders, if you have a mind to purge the Head or any other remote part, that you give Pills after meat. But our Methodus medendi is contrary to this which persuades us to give our Purges, especially such as purge any particular humour, upon an empty Stomach, or if they are very strong to take a little Broth before them. I shall not here give reasons; But Experience confirms Damascenus his rule, for oftentimes in several cases our

chief Physicians give Pills after Supper with great success, as I after their example have done several times. And, to speak the truth, I have not yet observed a more present Remedy to purge the Brain from all superfluous humours. And, which is wonderful, they are given in a much less Dose than those that are taken in the morning fasting: They are taken an hour or two after a light Supper, sleeping upon them: About four, five or six by the clock in the morning they work gently, and without any grievous symptom, viz. reaching, vomiting, loss of appetite, gripes, or any other: And they may be repeated sometimes every night, sometimes every other night. And thus several have been purged by a little Dose, who before could not be moved with twice as much; when they took it in the morning fasting.

VI. It is also the opinion of many, that the Head is emptied better by Pills, than by Potions or Bolus's, because they draw more violently from the distant part, through their long abode in the Stomach: This indeed is certain, that Pills do purge the Head effectually; but they have this not from their form, but from the strong Medicines of which they are made. This mistake had its rise from a false supposition, that Purgatives taken into the Stomach, did draw the bad humours from the whole Body thither, which is not true (for were it so, Plasters to the Navel, and Purgatives held in ones hand, or smelled to, would not purge) but they doe it by transfusing something of themselves into the Body, whence there arises a commotion and fermentation of the humours, upon which the expulsive faculty being provoked, and driving the humours with the Purge headlong into the Guts, excretion follows.

Scennertus

VII. Do not purge the Head of a man in a Fever, lest he go mad; for purgative Medicines heat the Head, and the Heat that is in the Medicine joining the febrile heat, causeth Madness, saith Hippocrates, lib. de loc. in hom. Which to me seems very consentaneous to reason, and therefore if a man have a violent Fever, and especially in his upper parts or have his Head inflamed, or if his Head ake, or he be phrenitick, or if he have a great Ulcer, which cannot safely be irritated, I avoid Physick as much as I can, knowing for certain, that it affects the Head: Sleep shews this, which presently seizes them that have taken a Purge. If I can, I content my self with sharp Clysters and a low Diet.

Vallesius, 2.
Epid. 6.
p. 225.

VIII. In an Intemperature of the Head with Melancholy, always some Moistner must be mixt with Purgatives: Nor may a Purge be prescribed till the body be first moistned.

IX. The Ancients said, that Sneezers and Apoplegmatisms were indicated by excrementitious humours gathered in the Ventricles and substance of the Brain. This latter Age thinks not that these parts do empty the humours gathered there by the Nose and Palate; nor that what is evacuated, is excrements of nutrition gathered in the Meanders of the Nostrils and Membranes of the Palate and Jaws; but in some mens opinion they are bilious, phlegmatick, melancholick and ferous humours, derived thither partly by the Arteries from the whole body, and partly from the Salival ducts. For this reason they are indicated by the cacochymick impurity of the blood, diluted with much Serum, that its flowing into the Brain, its farther mixture with the circulated blood, and its approach to the more noble parts may be prevented.

Rolfinceus,
meth. med.
specialis.
p. 605.

X. If you make use of Sneezers, to unload the Brain in its Intemperature with Phlegm, you must abstain from violent ones, as Powder of white Hellebore, Root of Lily Conval, and the like, because of the great agitation they cause in the Brain, convenient onely for such as are in a Lethargy or Apoplexy; it is sufficient if you onely put a Fibre of the Root into the Nostril, and then pull it out again.

K

XI. Some

Quercetan.
Therm.
dogm. re-
fili. c. 13.

XI. Some think, that the use of Ptarmicks does rather encrease than hinder a defluxion of humours from the head to the breast, and that this should not be used but in case of extreme necessity, and universals premised. But in my opinion they are grievously out, seeing in great and sudden suffocating defluxions they are very properly and successfully used. For Nature hath ordained these Channels for the emptying of the Brain, whom Art imitating doth so promote, that in an open and free passage through this same way the course of the ferous humours is expedited and turned back. Avicenna uses a certain vaporous Sternutatory, made of very strong Vinegar, in which he dissolves a little Calor, the steam whereof causes violent sneezing.

Riverius.

XII. As much Extract of Tobacco, made with *Aqua vite*, as a Pease, laid on the Tongue, brings off a great deal of Phlegm. Exceed not this quantity; for if it get into the Stomach, it will cause grievous vomiting.

XIII. As often as the Head is indisposed by outward Cold of the Air, Water or Snow, or the Nose doth run, or they be troubled with a defect of animal Spirits, so often I have observed my Patients successfully and quickly cured, if, as quickly as may be, that be driven out of the Head again which was got into it, or any other part of the body, and was hurtful to them. And this either by one Sweat, or, which I prefer, by several; but they must be spirituous and volatile: because they must be such as not onely alter and correct the cause of the Cold and of other evils attending it, but amend whatever amiss is introduced into the body, contained or containing. For this purpose I commend the following Receipt: Take of Water of Fumitory, Fenil, each 2 ounces, simple Treacle or any other Aromatick water 1 ounce, Spirit of Sal Ammoniack 20 drops, Oil of Cloves 3 drops, Bezoaricum minerale half a drachm, Laudanum Opiatum 2 grains, Syrup of Red Poppies 1 ounce; mix them. Let the Patient take two Spoonfuls of this Medicine, and when he is moderately covered expect a Sweat, which he will facilitate and obtain his desire, if every half hour he take as much of it, till the Sweat burst out, for then he must use it more seldom and sparingly; he must use now and then some plain broth, with a little Wine in it, to repair his strength, and make him the more able to sweat the longer; for nothing does them so much good as a gentle Sweat sometime. As often as the natural and competent Secretion of the animal Spirits is hindered by an inward or aguish chillness, or by any other, that without an Ague fit doth now and then seize a man; so often by the like Sudorifick rightly used, the Sweat arising sometimes sooner, sometimes later, the desired Secretion of the animal Spirits, so necessary to humane felicity is sooner or later restored: for by help of this or the like spirituous, volatile and aromatick Medicine the hurtful and cold Vapour is dissolved and dissipated in Sweat or insensible Transpiration, which caused that dulness in the sense and lifelessness in motion. And whoever in such an internal or external Cold do think to cure by Bleeding, Vomiting or Purgings, they cast their Patients into greater hazards, even of Life it self, as I have observed more than once, &c.

Sylvius,
Trac. med.
l. 2. cap. 1.
sect. 31.
ad. 36.

XIV. The natural temperament of the Brain seeing it is very moderate, we should therefore use both inward and outward Medicines for the Head, with great caution, lest while we change its native temper, we bring some great mischief on this most noble part. Wherefore their boldness is not to be approved of, who attribute so much to those Waters called *Aqua vite*, being made of violent hot things, that they affirm all Diseases of the Head may be both prevented and cured by the use of these same Waters; not considering, that most Diseases of the Head do come rather from hot causes than cold, especially in those persons that are either

in their youth or manhood. Besides, in our Germany the way of most mens living is such, that there is scarce one in a hundred who gathers not a particular Plethora in his Head: Whence it happens, if the use of *Aqua vite* be prescribed to one of these men, that it, seeing it is altogether vaporous, immediately gets into the Head, and disturbs it, being full of various humours, and disposes it either to the Epilepsie, Apoplexie, or to dangerous Catarrhs. But that this opinion does not want experiment, you may understand from this, that those Apoplectic persons to whom these *Aqua vite* are given, do almost all of them dye or grow worse, as I have often observed, and do find it observed by others.

Oethaus, a-
pul Scheu-
kium.

XV. Some prescribe an Issue in the Coronal Suture to be made with a Cautey, and do commend it for drawing out and evacuating the humours from the Brain and its Cover. Although this is very familiar in some mens practice; yet I have known it succeed but ill with several, so that I have ordered many Issues, thus made in the top of the Head, to be stopt up, and that, convinced of it by reason as well as by experience: For the Blood transfers more Feculencies towards the place, where it used to lay its Recrements, and discharges them all thereabout, and especially in the part affected (as being weaker and more susceptible of them) whence it happens that the Disease is oftner increased than cured. For the same reason, namely, to derive the humours from within the Head to without, some dig fontanels in the Bregma, above the Coronal Suture, and others behind in the head, at the beginning of the Lambdoeidal Suture: but the same Exception is against this as against the former. But much better certainly doth an Issue in the Arm prevent the morbidick matter that used to be discharged on the Brain, one in the Leg makes Revulsion of it, and one made a little below the Head derives it thence. Therefore for the more grievous Diseases of the Brain or its Meninges in Infants and bigger Children, we cut a hole in the nape of the Neck; in grown Persons and old Men we make Cauterics on each side the Spine between the Shoulders, and there we make Issues big enough to receive several Pease, with great benefit. As for holes cut or burnt behind the Ear, or a Seton drawn through its carnosus lobe, I have seldom observed them to doe any good, but often to create much trouble; inasmuch as the Solution of continuity made in these parts doth not run much ichorous matter, nor long: for although the hole be stopt with a Pease or Pill, yet the skin will grow over it in spite of Wills ones Teeth.

XVI. Avicenna, lib. 3. fen. 1. tr. 2. c. 33. proposes Incision of the Arteries in the Temples, or burning them with Cauterics, for the interception of Vapours which ascend with the arterious blood through the Arteries; and he describes the manner, and things necessary for such an operation at large. And he orders three Cauterics to be applied to the Head, that the humours may be drawn from the Brain; two upon the Temples, to intercept the humours and vapours ascending from below, and one in the Nucha, or behind, between the Head and the Neck. But Jacobus de partibus doth not without reason add in his Commentary, Since most Patients will scarce admit of gentle Remedies, who will endure to be so often burnt? And therefore he advises the Physician, never to attempt the use of so many Cauterics, except they be earnestly requested by the Patient and his Friends: because it is a question whether by the use of them the Disease will determine, and it may be feared, when the Ulcers are healed, the Disease will return.

XVII. Whether is the application of hot things good for the hot intemperature of the Head? This hath been tried especially by our modern Chymists, who in a hot cause use the most subtille Spirit of Wine outwardly, that the Pores may be opened, and

and the hot Spirits drawn out by a similitude in substance; and this hath place in a hot Intemperature coming from a hot cause, but not in all; which is effectually performed by Camphire, drawing out the hot vapours by reason of its likeness, so making way by the tenuity of its parts for other Medicines, and not as is commonly thought: For Physicians being convinced by the evidence of the thing it self do well conclude it to be hot. Upon the like reason Snow and cold water are applied to the Limbs benumbed with Cold, and not cold but hot things to a Burn; so the Fish of Cockles outwardly applied fokes up all moisture.

XVIII. Three things must be observed in washing the Head, viz. that contrary to the common custome, the Head must so lean back, as that the Eyes may look upwards. To use bitter Almonds instead of Soap, and not to rub with too hot Cloths, nor overheat the Head with too violent rubbing.

Zecchius,
Consult. 27.

XIX. Washes prepared by Art doe the Head more good, and are used with less danger than Bath-waters. Some are of opinion that the Head is weakened with frequent Washing: And it holds good in a strong head, and one unaccustomed to washing; but of an infirm head, and such as is accustomed to wash off the filth, it is not true. We must wash in Summer time in the Morning, in Winter before Supper; and the same day the Feet must be washed.

Crato.

XX. For Epileptick persons, and those that are any other way troubled in their Head, a Plaster of Gumms is very good applied to the Nape of the Neck; from which a certain Nobleman, by the advice of an Empirick found much benefit. Either because it hinders the ascent of Vapours and hot blood to the Head, or because it wastes the vellicating Humours from the original of the Nerves. Three are laid on the Nape one after another, and there let alone till they fall off of themselves, which will last for some weeks; then the place must be washed with some warm water, and another applied. Thus Plasters of Tacamahacha, Caranna, &c. applied to both Temples and the Forehead do intercept the Humours that fall upon the Eyes and Teeth, and do bind the passages in the Veins.

Bartholinus,
Cent. 5.
Hist. 25.

XXI. Rubbing the extreme parts is commended, but such a rubbing of the Head as fills it with Vapours, and does not empty it, must be avoided. Let universal evacuation precede it, then let it be done in this manner, first, let the Neck, Arms and Spine of the Back be stoutly rubbed, then the Thighs and Legs, and last of all the Head: for then there is no danger of drawing Vapours or Fumes to the Head, because they are already diverted to the parts afar off. Thus it may be done, the Brain being first evacuated: Friction must be made in other parts of the Body with a course Cloth hot, but in the Head not with a very hot Cloth, it is sufficient if the Cloth be onely dry and not hot at all; and this must be observed in the Epilepsie, Apoplexy, Catarrh and other Diseases of the Head, that we begin our Friction from the Neck, descending by degrees to the lower parts, even to the Legs and Feet.

Rondeletius,
Pract. Med.
77.

XXII. Anatomists and Experience it self do shew, that the Heart has a great sympathy with the Brain: for the Heart supplies the Brain with vital Spirits, and in Swoonings it is known that the hurt is communicated to the Brain; so when the Brain is hurt, the Heart also sympathizeth: Therefore in an Epilepsie the trembling of the Heart does ensue, that malignity which troubled the Brain, being communicated also to the Heart. And the case standing thus, it will not be amiss in great hurts of the Brain, to apply comfortable Topicks to the Heart. I will confirm this with Experience; As I was upon Recovery from a malignant Fever, that had cast me into a Lethargy, upon any slight occasion I used to fall into Watching, which present-

ly brought me very low: Wherefore when I was once in great danger of my life, and I perceived not onely the Faculties of my Brain, but the Strength of my Heart to be much wasted, I applied a Cordial Epitheme to the Region of my Heart, and then I composed my self to sleep: And as the virtue of the Epitheme penetrated and strengthened the Heart, I perceived as it were a certain Beam ascend from my Heart to my Brain, which gave wonderfull Relief to my Head; afterwards I fell into a sweet Sleep. And after this, I perceived the same Experiment did good to others.

Oethius ad
pud S. bened.
kium.

XXIII. I shall confirm the efficacy of Plasters to the Feet in Diseases of the Head, from a very rare Observation. Some years ago a young Dane being returned from a far Travel beyond the Seas, upon altering his Diet fell into a grievous Ophthalmia, or a *Chemosis* rather, the Balls of his Eyes starting out, and his Eye-lids inverted, he could neither endure the Light, nor the least Breath of Air, &c. so that neither I, nor a very skilfull Chirurgeon, could find any Remedy doe good to this growing and pertinacious Evil; but we were forced to make use of the last Remedies, which Hippocrates in the last Section of his Aphorisms commends; nor yet did the Patient perceive the least benefit by all these things; wherefore I thought with my self either to leave my Patient to the Prognostick upon the sacred authority of Hippocrates; or apply my self according to his rule, to undertake the Cure of this *Chemosis* another way. I enquire therefore more carefully and narrowly into my Patient's former course of life: He told me how he had undergone the greatest hardships, and that he was almost killed with his Toil in Candy, when he served the Venetians as a Foot-soldier: He protested ingeniously, he never defiled himself with those Vices, which are the fruits of Youth, and with which some Travellers of all Nations come home filthily polluted, like Dogs that have lost their tails. Seeing therefore this civil young Man did, among other things, complain of great heat in his Feet, for which he could not sleep; I ask him farther, whether his pain went some time off; or were continual, and whether new or old? He told me it was continual, and old. Therefore I ask him, how long since it began? He said, he could not resolve me that. I could not rest here, being willing to get out of him the true cause of this Disease or Symptome: wherefore, when, among other things, he had told me how he had travelled long Journeys and very fast on foot from Padua to Hamburg, and that he had performed this foot Journey in five weeks time. I began to suspect that the heat of his feet had overheated his blood, yet without a Fever, and that this blood either caused or fomented the Disease in his eyes. Upon this I had a mind to try how far carefull Reasoning could help practical Studies, or how much Anatomy (sometimes by Authours called useles, and which even Galen, 4. Anat. adm. c. 1. seems to style rather *wrangling* than *profitable*) could conduce to the Study of the Practice of Physick, or whether the Circulation of the blood could doe as much in curing an *Ophthalmia*, as it does in curing an *Agrypnia* (or Want of Sleep.) Therefore I obeyed Hippocrates, l. de loc. his Axiome, *That old Diseases must be made new ones*, that is, as I ever understood it, they must be pressed upon with new proper Remedies afresh, just as if a fresh fit of any Disease should come upon one: And I renewed the Cure of this *Chemosis*: Besides, in the fore-cited place He gives in charge, that *In Diseases, that a man understands not, he must give a violent Purge*, which Rule I followed, as Ariadne's Thread. Therefore, Universals premised, I commend to my Patient *Emplastrum Imperiale Jac. Fabricii* as a thing, whose excellent virtues I had often tried in asswaging Pains of the Gout; But because in this individual a bare hot Intemperature without matter had seized his feet, I mixed with one ounce of this Plaster of Nitre

prepared and Gum *Caranna* each half an ounce, and in five or six days time not onely the Intemperature of his Feet was corrected, but by chance also I found a Remedy for Corns in the Feet; for when the Soles of his Feet were uneven and thick beset with innumerable Corns, it happened, that by using this Nitrous Plaster they every one withered away. And by this method was this young Man freed from an enormous Ophthalmy, that had laid him up in a dark hole eleven weeks, who to this day (as it is now three years since) hath not suffered the least *Taraxis* (or *Bloud-shed*) in his Eye. Henceforth therefore let them hold their Tongue, who frowardly deny the Circulation of the Blood: for I verily foresee, that in future Ages, it will give light to many abstruse Diseases, even those they call Diseases of the Form. But here this *Quere* must be resolved, Why those things we apply to the Feet are commonly believed to benefit the Head? The Reason is at hand, Because by application of hot or cold things to the Feet or the Soles thereof, the Blood is quicklier altered by reason of the numerous *Anastomoses* of Veins and Arteries there, which being altered, is by means of Circulation carried to the Head: So Blisters applied to the Wrist either take away or abate the Fever: they take it away, when the febrile ferment, that is then in the Veins, runs out with the *Serum* into the Blister raised on the Wrist: they onely abate it when part remains behind. And cold Alteratives cool the Blood, as when we apply Nitre dissolved in Lettuce-water, or the pulp of a Lemon to the Wrist. He therefore that would have a care of his Health, would doe well, if by reason of the said *Anastomoses* he fence his Hands and Feet well against the injuries of the Air, and avoid such Objects, especially extreme cold ones. A certain person (saith the famous *P. Marquardus Slegelius*) being employed in clearing away some Ice, wherein he used an Iron tool, fell suddenly into a Swoon, the Cold being transmitted by his Hand to his Heart, &c.

XXIV. In all Diseases of the Head, most Men acknowledge, it is good to keep the Body loose; but few shew a reason for it. Now I think Costiveness is pernicious, not chiefly, because the matter retained in the Guts often hinder the necessary use of Remedies; but because Vapours are perpetually elevated from the matter retained, and from other Humours of the lower Parts, to the higher Parts of the Body, and especially to the Head: For these Vapours, while they continually affect the Head, otherwise afflicted, are not onely burthensome in quantity, but according to the different qualities disturb and corrupt the animal Spirits, whereupon all the ills in the Head grow worse, and new Symptomes frequently arise: Therefore it is good in all Diseases of the Head to keep the Body open.

XXV. It is very well known that Coriander is given to suppress Vapours arising from the Stomach to the Head: Yet some disapprove the use of it, because it is its nature to affect the Head, nor does it hinder the ascent of Vapours; but rather carry them with it self to the Head; yea, and according to *Dioscorides*, cause Madnes: But this is, if it be immoderately taken, which is common to it, with Saffron, Nutmeg, Frankincense, &c. yet this is no reason that it should be rejected, if moderately taken, especially prepared: For that vaporous and volatile part (as Chymists word it) that is in the Coriander, and which taken immoderately hurts the Head like Poison, is fixt and corrected by the Vinegar, so that it becomes a proper Remedy to help Concoction, and clear the Heart and Brain, as experience shews.

XXVI. Concerning Quilts and Caps we must take notice, that such as are made of very strong scented things do affect the Head, and cannot be endured of all people: And this is true not onely of Muski-

fied things alone, but of all strong smelling things in general, though grateful, if they be beyond measure such: And they make the Head to ache, and cause a turbulent motion in the Spirits: for this Maxim holds true here, *Every extreme Sensible hurts the sense*. Wherefore I have seen some, especially at the beginning, that could not wear these Spice-caps without the Head-ach.

XXVII. Nor yet must the Ingredients be too hot, nor too cold and astringent; not too hot, lest they melt over much, dissolve and precipitate the matter into the Vessels, which would gladly get out at Nature's High-way; thus hath a dangerous Fever come of a Catarrh, by unseasonable applying Oil of Amber to the mold of the head: We must have a care of Astringents, lest the Brain be hurt by powerfull Astringition, and the motion of the Humours be stopt.

XXVIII. Caps are most proper in essential Diseases of the Brain: They alter and strengthen it, that it is not so apt to receive Defluxions and Impurities: They discuss both the footy Vapours blended with the *Lympha*, and the abounding ferous Humours; They intercept, especially those that are made of Astringents, not so much, as the Head is the first Spring and Original of all Catarrhs, which nevertheless was the opinion of the Ancients; but as at least it is not altogether without fault, so the Moderns hold: Thus they keep back the shower of a Catarrh: Thus they stop the *Lympha* when it is running into the Pores of the Brain, and put a stop to all manner of Defluxions.

Medicines especially made use of by eminent Physicians.

1. Tincture of Amber is a Specifick in all Diseases of the Head, especially in Weaknes of Mind, A. Grulingius, l. 1. par. 2. co. 2. 1.

2. We have sometime strengthened the Head with this Remedy alone: Take of Nutmeg, Aniseed, Cinnamon, Marjoram, each 1 ounce; let them be bruised grossly, put in a Pipe and smoaked like Tobacco, morning and evening: for it wonderfully strengthens the Brain, and purges the Humours.

3. *Levinus Lemnius* saith, that *Lignum Aloes* doth wonderfully strengthen the Brain.

4. Take of Ly made of Vine ashes, what is sufficient: Boil in it some Marjoram, Bayberries, Pennyroyal, Calamint, Basil with the Seed, Agarick bruised and tied in a rag, 2 drachms. Add a third part of Wine to the measure of the Ly: Boil all to the consumption of a fourth part; press it and strain it, and in this Ly with some sweet Soap wash your Head. The Head will be wonderfully strengthened by this Washing. ¶ Oil of *Ladanum* rightly prepared, dropt into the Ears, and sometimes rubbed on the Crown of the Head is a most excellent Remedy.

5. I reckon this a curious external Remedy for strengthening the Head. Take of old Oil-olive, Cretian-wine, each half a pound, of the Wood and Fruit of Balsame, each 1 ounce; Flowers of Clary, Sage and Rosemary, each 1 handfull. Mix them, and let them stand in a Glas 3 days in Horfe-dung, then distill them. For 3 Liqueurs will come out, every one of them of great virtue, but the third of most. With the first the whole Head, being purged before, must be rubbed every day. With the second and a very small quantity of the third, the Sutures must be anointed, and one drop must be dropt into the left Ear, once in 3 or 4 days.

6. In a cold Intemperature of the Head black Helbore-root with as much Sugar-candy is an excellent Sternutatory (It is *Helmont's* Medicine) and is also good for the Cure of a Catarrh.

7. In a hot Intemperature of the Head it is good to snuff up cooling Liqueurs into the Nostrils, among which Woman's Milk, with Oil of Violets or Water-

S. Pauli Dis-
gress. de Fe-
bribus ma-
lignis, p. 53.

Oethus a-
pod Schen-
kium.

Sennertus,
Pract. l. 1.
par. 1. c. 2.

Wedelius;
de Med. ext.
p. 202.

Idem.

Idem, p. 206.

C. C. de He-
redia, p. 130.

Montanus;
conf. 24.

Id. conf. 40.

Monardus;
Ep. l. 17.
Epist. 1.

Riverius,
Prax. Med.
l. 1. c. 1.

Sennertus,
prax. l. i.
par. i. c. 1.

Water-lily, or an Emulsion of Lettuce or Poppy-seeds made with Lettuce-water are commended.

¶ Castor is commended inwardly, than which among Simples there is scarce another more effectual and powerfull in heating the Brain. Also upright Vervain, which (as they write) does discuss above all things, and perfectly strengthen the Head, especially green, yea and dry also with its roots and Mother of Time boiled in Oil. Galen also saith, that Sows breeding under a Water-tub are very good, if they be boiled in Oil. ¶ Also the Medicine called

Idem, c. 2.

Hippocrates his Treacle is good in Phlegmatick Diseases of the Head; it is made thus; Take of Wormwood, Horehound, French Lavender, Mastick, Rheubarb, Groundpine, Germander, each 3 drachms, Hyssop 1 drachm, good Agarick powdered the weight of all, make them up with clarified Honey. The Dose is 2 or 3 drachms in the morning in the decoction of French Lavender or some other Liquour. ¶ Wine is very good to strengthen the Brain, and rear Eggs with Sugar and Cinnamon, if good Wine be drunk upon them, as also is Amber-gryse with Sugar taken in broth or a rear Egg.

Idem.

Idem. ¶ Wine is very good to strengthen the Brain, and rear Eggs with Sugar and Cinnamon, if good Wine be drunk upon them, as also is Amber-gryse with Sugar taken in broth or a rear Egg.

Capitis dolor, or the Head-ach.

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Medicines.

I. **H**ippocrates in the Head-ach depending on a Cacochymy which is cured by concocting and purging the humours, abstains from Bloud-letting, as is manifest from lib. 3. de morbis, v. 14. because, the Brain being cooled by Bloud-letting, Concoction is hindered, and thence arises great Prejudice to the Patient, which Halicarnassensis perceived, who is mentioned 7. Epid. sect. 2. v. 462. Halicarnassensis his Ear ake in Winter, and his Head very much, now he was about 50 years old, he was let-bloud, his Head being evacuated and cooled was hurt, for no Suppuration was made, he became phrenetic, and died. For seeing the Patient could not escape this Disease, unless, as Hippocrates saith, the humour had run at his Ear, letting-bloud did cause Death, by hindring this running: Which I would have our modern Physicians, who let bloud so confidently, take good notice of. ¶ The Head-ach is either by Idiopathy, or by Sympathy from the Bowels below, and from the heat and evaporation of humours. The idiopathick Head-ach, when a Cacochymy is gathered in the Brain, or some cold Mass of humours, requires Purging; the other by Sympathy, Bloud-letting. So 5. Epidem. A Woman in Pheri that had been long troubled with the Head-ach, and to whom no body could give any relief, no, not when her Head was purged; yet she was better when she had her Menes easily; and when her Head did ake, she found benefit by Sweets applied to her Womb. Lo, a Head-ach by Sympathy from the Womb grew appeased by the discharge of Bloud and applying odoriferous things to the Womb. So 2. de morbis in Head-aches, where the Veins discharge the bloud into the Head, he makes no mention of Purging, but onely recounts the advantages of Bloud-letting: But in lib. de affect. speaking of the Head-ach by Idiopathy, these are his words, The Pains come from Phlegm that is gathered and moved in the Head, therefore if you will ease the Head-ach you must purge Phlegm. And 2. de morbis, when he had proposed a sudden Head-ach, with loss of Speech and throting, he lays the whole stress of the Cure in Purging. But Hippocrates, lib. de locis, intimates that Bleeding, not Purging, is proper in the Head-ach by Sympathy from some inflamed part or boiling humour, Purge not the Head of a man in a Fever, lest he go mad, for Purgatives heat the Head, and truly the heat that is in the Medicine added to the febrile heat, causes Madnes. For such a Head-ach is by accident, from the heat of the Fever, therefore we must not provide for the head by Purging, which would cause Madnes, but by such things as chiefly destroy the Fever, among which Letting of bloud has the chief place.

Pr. Martia-
nus, comm.
in V. 24. l. 3.
de morbis.

Sinibaldus,
Anipbon.
l. 3. Ant. 15.

II. One was held with a grievous Head-ach by Sympathy from the whole, by Bleeding in the right foot the pain was taken away from his head on that side, and after that, the same succeeded according to his desire on the other side also.

J. Rhodius
cent. 1. c. 1
obs. 73.

III. Nor must I conceal a present Remedy for a pertinacious Hemicrania, tried by Spigelius upon himself and several others, The opening the Vein that runs between the Forefinger and the Thumb.

Idem, obs. 504

IV. One that was grievously troubled with the Head-ach, through the violence of the Vital Bloud turned that way, made use of several Remedies, but all in vain; but at length letting bloud in his Temples he recovered: And this Bloud was of a florid colour, but of so thin and light a substance, that like a Sponge it swam upon its Serum: Its surface was smooth and shining, as if it had been covered with a fatty film: And the whole texture of it was so rare, that you could scarce touch it with the edge of a Knife, but it would sever into vari-

Tulpius,
lib. 1. c. 48.
OUS

ous parts. ¶ A Man of fifty was troubled with a sharp Head-ach for two years, which seized the right side from his Crown to his Temples: It would return three or four times a year, make him keep his bed, and bring him almost to despair, without either Fever, Thirst or Heat; but with a great beating in his Temples on that side. When I had tried many things in vain, and the Pain was violent, I proceeded to open an Artery in his Temples; the Blood leapt forcibly out to five ounces; his Head-ach went away in half an hour, and never returned. ¶ When the Arteries beat, the Pain is onely on the out-side, which the Physician ought to take especial notice of.

V. A Woman had been held with a violent pain in her head twelve days; her Physicians prescribed her Clysters, Purging, Bleeding in the Arm, Sheeps Lungs; her Head-ach continued, at last having applied Cupping-glasses to the part grieved, a great quantity of blood run out by Scarification, for stopping of which, Tinder made of Linen-cloth was strowed on it: And presently her Head-ach ceased.

VI. In the Head-ach oftentimes Matter lies between the Skull and the *Pericranium*: You must touch the place gently with your finger, that if you find any Matter there, the place may be opened, and much rather, if the pain be fixt in that very place. For frequently, when the place is opened, and the matter run out, the Patient has ease: and there may otherwise be fear of corrupting the bone. If any vein bethere, it may be opened, or cut quite through, unless it be very large. In intolerable torment of the head, that is also continual, and will not yield to other Remedies, we must use the Knife and Fire: for Purging, Cupping, Topical applications, &c. are found ineffectual, because there is a certain Heick intemperature and infirmity in the head.

VII. When I could not conquer a most stubborn outward Head-ach, coming of a cold intemperature with matter, by very strong Medicines, guessing, that either the *Pericranium*, or the Bone under the *Pericranium* was prejudiced by that matter, I proceeded to burning with good success, in which I always took care to run the hot Iron to the Bone (which I ever found abounding with moisture.) Sometimes I found the Bone it self rotten, which being scalded, all the Pain ceased. I did not make this burning behind or before in the Head, upon the Coronal Suture (as most use to doe, to divert the better) but on the right or left side of the Head, according as this or that side was pained, with success. But that men may know, how the Bone, while the Skin is whole, may be discerned to be carious, let them go to *Hippocrates, lib. 2. de morbis*, where he gives notice, that in such a case the Skin parts from the Head to this side and that, i. e. the Skin may be perceived by the touch to be parted from the Bone, which must be taken special notice of, because it is a certain sign that the Bone is foul.

VIII. The Chirurgicall means, commended especially for a cruel and inveterate Head-ach, is usually the burning or cutting an Issue in divers parts of the Body. Without doubt when they are made in the Arms or Legs, they are both less troublesome, and doe some good, inasmuch as they withdraw the fewel of the Disease from the part, and remove it far from that place. Moreover, an Issue in the nape of the neck, or a Seton in the neck, or in the tip of the Ear, or near it; also a pin of Bastard Hellebore root, put in a hole bored in the tip of the Ear, are often used with advantage, inasmuch as they evacuate many Serosities, and draw others towards the Emunctories, that is, the Glands. But now the most talk, and greater expectation is, of Issues made either in the very place grieved, or near it; so that large Issues are made in the crown of the Head, or upon

the joyning of the Sutures. If we measure the fruit of this Practice by the success, it will appear little and seldom profitable, but often unfortunate: for I never knew any cured of their Head-ach by such Issues; but several have been made worse by them. And Reason tells us plainly as much, for wherever an Issue is made, the Serous Humour flows thither from the whole Mass of blood, and consequently from the whole Body, and is often gathered there in greater plenty than that it can find a passage by that outlet; for which reason Inflammations, Pustules, and divers Humours gather about Issues. What other therefore can we think, than that Issues applied to the Head in the Head-ach, do cause more morbid matter to be gathered there?

IX. A young Maid had been above a year wonderfully tormented with a piercing pain in her Head. The Physician, suspecting (as it proved) that something lay on the Membranes, trepan'd her with good success: for when her skull was open, a small drop of foetid matter, scarce so big as a Millet seed, came out; nor did her pain ever after trouble her. ¶ N. had conficted several years with a most violent Head-ach, and he was cured by boring his Skull five times; onely his Head, the Membranes being cooled and thickened by opening, was a little dull. ¶ A cruel Head-ache, caused by the Pox, without *Gummata*, in a Man of 70, was eased by repeated trepanning (which laid all the corrupted bone open, whence Matter ran in great plenty) and returning at certain Intervals, it was then cured by the same means. ¶ I resolved to trepan a Farmer, who had got a most grievous Head-ach by the Pox, on that side where his pain was most, in three or four days after trepanning his pain abated, and in twenty days time he was perfectly cured. ¶ I trepanned a Woman that was afflicted with a grievous *Hemiplegia* (or half-head-ach) who was well, while the hole was open; but it being closed within a few days, she relapsed into her old disease. ¶ An ancient Man had been tormented three years with a cruel pain in his Head, he submitted himself to trepanning, it was done in the right side, and the fore-part, a little above his forehead, and he quickly recovered. Perhaps the vaporous matter that affected the Head, while it had no egress, caused pain; but when a passage was made, it went out daily. ¶ *Willis*, in his Chapter of the Head-ach, thinks, a Man can expect little good from Trepanning. Truly (saith he) it does not appear to me, what we can expect for certain from opening the Skull when it akes. If an Abscess lay there, this were the onely way of cure; but an Abscess would sooner cause drowiness, and mortal convulsions, than remove an Head-ach: If an Inflammation or Pustules, or *Erysipelas* had seized the *Diploë* (or the second place of the Skull) I know not whether these Tumours, exposed to the open Air, would more easily evaporate, or whether Remedies applied to them thus bare would doe any good or no: But if the pain be caused by any Tubercle, or Scirrhus, or Callous Swelling in the *Meninges*, I think, opening of the Skull will doe very little or no good at all.

X. A Woman had endured pain for some years about her forehead and eye-brows: A certain person rubbed and pulled the lax tip of her Ear, till a Vein appeared, then he cut it with a piece of a flint, that Men strike fire withall, it bled very black Blood; and by this bleeding she was cured.

XI. A Nobleman 30 years old had laboured under a Head-ach, with a Catarrh falling on his Breast, and an extenuation of his whole body for several years: After I had applied potential Cauteries to each arm, he was first freed from the pain in his Head, and then perfectly from his other symptoms: I could produce many such examples.

XII. A certain Person was troubled with a most bitter Pain in his Head, taking and leaving him at set hours, which periodical pain lasted fourteen days,

Pacheco,
obs. Riverio
comm.

Rhodium,
cent. 1. obs.
7.

Velschius,
Syll. obs.
10.

Hollerius,
obs. sing. 3
& 1.

Salvius Divertus,
Annot. in Altimar.
c. 9.

Willis, cap.
de Cephalalgia.

J. Rhodium,
cent. 1. obs.
69 & 70.

Marchetti,
obs. 18, 19
& 20.

Panatolus,
Pentec. 5.
obs. 25.

Solenander,
conf. 15.

Fabricius
Hildanus,
cent. 4. obs.
servat. 72.

Tulpius, *obs.*
l. i. c. 33.

days, though no remedies that were requisite were omitted, as neither Cupping with Scarification, nor application of Vescicatories to the hind part of his Head; from which last Remedy I saw not onely this Patient, but many others reap great benefit.

Riverius,
cent. i. *obs.*
37.

¶ A Girl about seven years old had been troubled for two months with a grievous pain in her Head, returning once almost every hour so sharp upon her, that she wished her head were cut off: An Epileptic fit took her out of this life: The Substance and Ventricles of her brain were found full of Serous Humour. ¶ Another Maid, who had been long afflicted with such a pain, had her whole head shaved by a Chirurgion, and covered with a Vescicator like a Cup; when the Blisters were raised, it run great store of Serous Humour, and so she was cured. ¶ The Ancients frequently used Phlegmisms and Sinapisms; and it is the Modern Practice in violent Head-aches to apply Vescicatories sometimes to the fore-part, sometimes to the hind-part of the Head: Now, whenever ease is found by these fiery Topicks, it is because great store of sharp Serum is by such administrations discharged from the part affected.

Willis.

XIII. A Matron was troubled with a tedious and bitter pain in the left side of her Head: About four years before, she had been troubled with the Tooth-ach for six weeks together in her left jaw, which going off was attended with a pain on the same side of the Head: Hence I knew, the *Hemicrania* had its rise from the roots of some rotten Teeth; for four of her upper Teeth were rotten, and their roots stuck close together, which when they were drawn out, the grew perfectly well.

Fabritius
Hild. cent.
2. *obs.* 10.

XIV. There was a person grievously tormented with the Head-ach: By the advice of *Sylvaticus* he was pumped with hot Sulphureous Water, and within fourteen days his disease was totally conquered.

Rhodius,
cent. i. *obs.*
75.

XV. A Woman, too well known, was sick of a most cruel Head-ach, it was wandering, and worst at night, which made me suspect it to be Venereal, because there were besides spontaneous lassitude of Body, slothfulness and dulness to motion, sometimes thickness of hearing, with a tingling in her ears, &c; but especially because she had often used Mercurial Unctions, and Pills: I judged the pain was produced by some malignant Quality of the Mercury, that was got into the Brain: Therefore I twined two pieces of Gold round, and put one in each Nostril, and when she had kept it there some hours, it was taken out, and appeared tinged with Mercury: she held a piece of Gold in her Mouth, and that was taken out white also, and put in the fire, it recovered its ancient colour: And by this course often repeated her Head-ach was removed.

S. Jacos. id
obs. River.

XVI. A phlegmatick Person about forty was troubled with so cruel a Head-ach, that he could not endure the least noise, so that if one slept but into his chamber, he thought a Knife was run into his Brain. Many things were used to no purpose, at last I perswaded him to have a Seton made, which succeeded so happily, that he daily found a manifest abatement of his pain. After half a year he let his Seton close, instead whereof I made him an Issue in his Arm.

Hild. cent. 4.
obs. 7.

XVII. A Nobleman having the Pox, was among other symptoms taken with so violent a Head-ach, that every evening he not onely doted, but was taken with such cruel Convulsions, and Fainting-fits, that the By-standers thought more of his death than recovery: Which cruel symptome would yield to no Medicine at all taken inwardly, till at last I applied *Emplastrum ranarum cum Mercurio*, upon which the pain went miraculously off within half an hour, and never came again.

J. F. Freu-
bler. in Epist.
Bartholinus,
cent. 3. Ep.
53.

XVIII. A Noblewoman of Padua was cured of an old Head-ach of many years standing, caused by choler, onely by taking old Sugar of Roses; the Acrid-

mony of the Bile, and its exhalation, that troubled the brain, being repressed: for the Rose cools and binds.

Rhodius,
cent. i. *obs.*
71.

XIX. Fr. Bonardus Professour at Padua tells, how he perfectly cured a *Hemicrania*, caused by the ascent of vapours, with bread sopped in Pomegranate juice, and given for three days.

Vell. hinc
Syllage *obs.*
12.

XX. One was complaining to me, how miserable his life was, through want of sleep, which a grievous Head-ach had brought upon him, now well-nigh a year, which was enraged by touching, and grew worse towards night: When I had felt his head, and found an humour settled under the Skin; besides this, the bitterness of his Pain, and his continual watching, gave me suspicion of some Infection: But on the contrary, whereas I knew him now in a lively old age, and that he had ever been of unspotted reputation, and free from any dishonest disease; and that his temper was Melancholick, and I see with my own eyes, he led his life exposed to the open air; then indeed I thought the humour, the continent cause of that Swelling, was a watrish one, but mixt with a sharp and bilious *Ichor*. When he had used all things to no purpose, I cause a Caute-ry to be immediately applied to his head behind: It was no sooner done, but a greenish water, much like green Choler, came away, and that for several days, and so he recovered.

C. Pilo; de
colluvie se-
resid. p. 51.

XXI. I cannot but remember that healthy Scurf, which did very seasonably deliver N. from an inveterate Head-ach, the Viscid Phlegm being expelled by the insensible vent-holes of the Skin, and sticking to the roots of the hair like glew, and by little and little producing a true Scald. Hence let Physicians learn how to imitate Nature, and with judgment observe, of how great use, both sneezing seasonably provoked, and Issues timely made, are: for Nature is the best guide.

Tulpius, *obs.*
l. i. c. 32.

XXII. A most bitter Pain racked a Woman, creeping with manifest sense of heat, sometimes from her foot to her head, and sometimes from her head to her great toe: Into which, when it was come down, I ordered a Cupping-glass immediately to be clapt to it, to get out that Volatick Spirit, which daily ranged the whole body with so swift a course; and when it was drawn out, I found those reciprocal circuits did cease, and the Patient cured.

I lem. l. i.
c. 33.

XXIII. Whether may a Purge be given in every Head-ach? *Rhazes* purgeth both in a Bilious and Sanguine, because the thinner part of the blood may easily turn into choler: *Avicenna* prescribes it in a Head-ach, caused by an immaterial intemperature of the head, as by the heat of the Sun, that the hot humour being carried off, the head may be cooled: He also purges in a cold immaterial Head-ach, that the cold humour being purged, the head may be made hotter: He purges for prevention sake, that he may decline the imminent danger of a Flux of humours, which pain doth raise: ¶ *Hol-lerius Perioche 2.* tells us, we must take notice in the Head-ach which is caused by Vapours, whether those Vapours be bred of Food, or of other Matter: For if they be bred of Food, Purging will be to no purpose; if of other matter, he bids us distinguish; for if the matter be small, and contained onely in the head, it must be got out by other Medicines: If it be much, or gathered in the whole body, we must Purge; But if it be thick and cold, we must first use preparatives and incisers: Which, if it can be concocted, and the Phlegm be sweet, he says, it needs no Purge; if salt, putrid or corrupt, we must of necessity Purge.

XXIV. A greater Dose of Physick must be given in the Head-ach, both because the humours ascend, that revulsion may be made, and because the sense of the parts is less exact, by reason of the resolution or retraction of the Animal Spirits. ¶ While the head glows with pain, all the humours, because they are inclined upwards, will not easily, by Physick,

Rondeletius
Fr. c. 7.

sick, be persuaded downwards; therefore the Purge must have a more lively virtue than ordinary, that the working may answer expectation.

Ætius. XXV. Clysters for the Head-ach will not admit of things that fill the head, Cummin, Fænugreek-Seed, Nitre, and other odoriferous things.

Mercatus. XXVI. In the Head-ach, and also in Fevers, we must not be too sparing in giving Syrups and Potions: but we may give to grown persons ten ounces in a Potion mixt of Syrups and distilled Waters, because in a less quantity they will not reach easily to all the Parts, and to the head.

Frid. Hofmannus, m. 4. l. c. 12. XXVII. In a Head-ach caused by serous humours Diureticks are of great virtue, to carry off those that tend to the head, while they derive them with themselves, as they are circulated through the mass of blood: for Diureticks, after they are carried with the chyle to the heart, and from thence by the *Arteria Aorta*, with the blood, into the whole habit of the body, do lead the noxious, tartareous, gritty matter, and the filthy, salt dregs, to the urinary passages.

Idem, ibid. XXVIII. Sweats indeed are not proper in essential Head-aches, because the serous morbifick matter is thereby more and more moved upwards towards the head: But in a Symptomack one they are more requisite, especially if the *Hypochondria* blow the coals, or an Itch be driven in: And this may very well be done in the cure of a *Vertigo*.

J. Langius, Epist. 30. l. 2. XXIX. *Galen* advises those that are drunk to wash with warm water the next day, and after washing to lye down to sleep, that they may concoct their crudities: Yet he would not advise washing in every Head-ach; but then to do it, when the head is hot, without a Fever, and after washing to eat Lettuce, and sup some Pisan.

Willis. XXX. Plasters are very convenient, and often prove very beneficial; they must not be very hot, and such as draw the humours to the place affected, but moderately discutient and strengthening. I usually prescribe *Empl. de minio*, or *Diasaponis*, with half as much *Empl. Paracelsi* to be applied to the head when it is thaven.

Idem. XXXI. Liniments of Oils and Unguents, though often used, doe little good; inasmuch, I think, as they make lax the tone of the fibres, if they penetrate deep, and so they lay more open to the incurfions of morbifick matter; Moreover, they so stuff the pores of the skin, that the *Efluvia* cannot evaporate.

Idem. XXXII. For the same reason hot Fomentations of Aromatick Decoctions, and other Cephalicks, often doe more hurt than good, inasmuch as they draw the humours towards the parts, and also open the pores and passages, that they may more easily be received. Therefore it is, that bathing the head, or Embrocation of it with a Pump in the hot Bathes is used to persons in the Head-ach, with no better success: When on the contrary it has done several good, to wet their Temples and Forehead with cold water morning and evening; yea, every morning to embrocate the whole head with cold water at a Pump, or at least to dip into a deep Vessel, or Well.

Zecchiuss, consulti. 16. XXXIII. In the use of local Medicines, we must have a care of all that have *Euphorbium* in them, indifferently used by many people; for *Euphorbium* is hot in the fourth degree, whence it is, that it exulcerates, and causes redness and inflammation: Wherefore *Galen* indeed, 2. de Med. local. used such a Medicine in a *Hemicrania*, coming from a cold Phlegmatick humour. But instead of this, there is one Medicine to be met with, that without any redundant heat, doth wonderfully draw out all the humour that causes the pain, though it lie never so deep: It is made of the fish of Cockles, pounded in a Mortar, and reduced to a smoothness, with a little *Frankincense* and *Myrrhe* in Powder; for the fish of

Cockles draws all the superfluous humour from the inside outwards.

XXXIV. When the Head-ach is so cruel, that the Patient is in danger of his life, then there will arise an Indication of taking away sense; yet, with great caution, seeing it cuts not off the morbifick cause: However, when the Patient grows weak, is in much pain, cannot sleep, and is in danger of a *Delirium*; we may so long resist pain, till he recover strength: Let the scope of Narcoticks be gaining of strength; we must begin with the milder sort, and first use them outwardly, then inwardly. Take this for a caution, Never apply *Opium* to the coronal suture, for the brain lies much under it, and the entrance thither is easie; but rather to the Temples, Nostrils and Forehead, though *Rhazes* put a little into the Ears. When the pain is ceased, and watching overcome, let the place be anointed with oil of *Chamæmil*, *Nutmeg*, &c. to take off the strength of the *Opium*.

XXXV. Salivation raised by *Mercury*, if so be it succeed aright, sometimes removes difficult and plainly Herculean diseases, and such as turn a deaf ear to all other Remedies: Inasmuch namely as this operation doth perfectly purge the blood and nervous juice, and the other humours, by a long spitting, destroy all exotick ferments, rectifie all enormities in the Salts and Sulphurs, and besides removes, and often carries off the morbifick matter settled and overflowing every where. Yet this Medicine is not without hazard; inasmuch namely as the *Mercury* becoming unruly, and carrying along with it a great quantity of very sharp, and in a manner poisonous *Serum*, and so rushing impetuously into the noble parts, and especially into the brain, with the medullary and nervous appendices, or into the Lungs, and about the Heart, leaves an indelible and sometimes mortal fault upon them. Wherefore in an old and grievous Head-ach, there is danger, lest the fibres being indispofed by the *Mercury*, and much corrosive *Serum* passing through them, should be more irritated, and be cast into greater spasms, and painfull corrugations: and farther, lest

the brain be invaded by the violent motion of the humours to the head, and then, which happens too frequently, sleepey, or convulsive diseases be brought on. ¶ Some, for inveterate Head-aches, after once or twice purging, fly to Quicksilver, wherewith they rub the head and other aking parts: These Men,

though sometime they remove the Pain, yet they always increase the Cause, and cool and moisten the brain more. ¶ There are some that commend *Empl. de Vigo cum Mercurio*, because it has been observed, that it hath put an end to an inveterate Head-ach, having evacuated much phlegmatick humours by spitting. ¶ Salivation terrifies several that are employed in inventing dissuaves against it: but experience dispels this vain fear. One that was sick of a grievous Head-ach, and miserably afflicted with it, being salivated, recovered under our care; and there was no sign of the Pox in him. ¶ *Willis*, in the place fore-quoted, approves of Salivation in the Head-ach arising from the Venereal Disease; In other cases he disapproves of it, and produces some examples of ill success.

XXXVI. An *Oxyrrhodinum* may not be applied in every Head-ach; Abstain 1. When a Catarrhe is joined with it, for the application of cold things increases the distillation, and by its driness strains out the humour down to the Breast; yet *Trallianus* allows it, when the Head-ach has its original from the violent heat of the head, which draws the humours like a Cupping-glass from the whole body; this way it does good by taking away the cause.

2. When plenty of gross humours or vapours cause the Head-ach; in which case *Oxyrrhodina* doe more harm by obstructing, than good by Repulsion. 3. If the Head-ach be critical; you may reckon it critical, if in a Fever it fall upon a critical day, if signs

Willis de cephalalgia.

Encheir. med. pr.

Ibid.

Rollinc. meth. spec. p. 164.

Hernius,

of Coëtion have preceded: yet if the *Crisis* should be by Vomit, they may safely be applied; otherwise, if Bleeding at the Nose were drawing on, by driving back you would cause Death. 4. They doe harm, if blood or another humour be firmly settled in the head; for then Digesters must be made use of, as *Galen* 13 m. m. 6. adviseth. 5. In a Head-ach that is malignant, or contracted from the Bite or Sting of a venomous Creature; the Venom must rather be drawn outwards by Rarefiers.

Hallerius,
Period. 2.

XXXVII. In the Head-ach caused by heat the juices of Purslane, Housleek, Kidney-wort, and other things of the like nature; but these things must be fresh, not parched with heat and without juice. Vinegar is good in Liqueurs; but it is forbidden to Children and tender Bodies.

Oethaus.

XXXVIII. It is known that some Empiricks rashly undertake that they can cure all sorts of Head-aches with their Cephalick waters, whereby many have been brought into perpetual tortures in their head. I knew a Nobleman, then but young, who, suffering a violent Head-ach from the ebullition of hot blood, through some bodie's persuation washed all his head in very strong *Aqua vita*: but by this unskilfull advice he was almost cast into Madness.

XXXIX. Castor asswages pains in the Head coming from the Womb, saith *Hippocrates*, lib. 7. de Epidem. and lib. 6. Great pain about the forepart of the Head, and what-ever others arise from the Womb. Now, indeed, that Diseases by Sympathy are removed by curing what is first in fault, and that this is the legitimate way of their Cure, is very well known. But Castor is commended for all Uterine Diseases (I say those that are improperly called Uterine, such as Fits of the Mother, whether they be caused by suppression of blood or feed, or by wind) by the joint consent of all Physicians. *Hippocrates*, in lib. de morb. mulier. makes frequent mention of it: for the same purpose lib. 2. he prescribes Castor or Fleabane. Therefore Castor taken inwardly cures the Head-ach from the Womb, but then it cures Diseases of the Womb that are accompanied with the Head-ach, i. e. Suppressions of the Menstrua, retention of Seed, and of the cold juices and wind. Nor does it cure all Diseases of the Womb, but onely cold ones; for it will rather increase Inflammations and the Erysipelas. Wherefore since the head may ake for Inflammations of the Womb, it is clear that Castor cures not all Head-aches from the Womb, but such onely as come from its cold Diseases, such as *Galen* affirms Fits of the Mother to be.

Vallesius,
Epid. p. 865.

XL. It may so happen, that a Disease of the head, or of any one place may increase or grow better with the Disease of another part or place; nor yet for all this be affected by Sympathy from that other part: for it may chance that matter may flow from the self same fountain to divers parts at once, and there may be no pain in the part that sends it, nor any thing amiss known or perceived there: As *Hippocrates* observed it happened to *Agessius* his Daughter, 6. Epid. 3. 4. who when she had a pain in her hip, was oppressed with an *Asthma*, and when her pain was eased, she took her breath well. Now seeing there is no communication between the Hip and the Breast, it was very reasonable to suspect, that the humour ran into each part from the same place, and was dispersed at the same time. The flux might be from the Brain, or it might be from the Womb; And therefore when two effects happen together, a man must diligently observe, whether the communication be from the head or from some other place. Although *Galen* in his Comment upon this place, says, that an Imposthume was broken in her breast, and when she had raised the matter, her *Asthma* ceased; but upon small ground: for it is more reasonable to think, that in a Woman newly delivered, the pain in her Hip came from the Ligaments of the Womb, and her *Asthma* from the Sympathy of her Breast with the Womb, and espe-

cially when she did not cleanse well, which caused both these Ails, and both these Accidents ceased; when she did cleanse: For the Womb in Lying-in-women, is the occasion and root of all their Evils, and there is a great Sympathy between the Genitals and the Breast.

Casper.
Cald. Il-
lustr. & Obs.
Med. 8. l. 2.

XLI. That it is requisite the outer substance of the Brain and the *Cerebellum* should be open, to the end, the most spirituous part of the Blood may penetrate it, and be as it were percolated through it; the cold of the Air, Water or Snow, vehemently affecting the head seems to prove; after which not onely a Rheum, but a more spare production of Animal Spirits uses to follow. But whoever upon taking such a cold do let blood, or think to take away the cause of this evil by purge or vomit, they endanger their Patient's life; as I have more than once seen it done by men, that are more conversant in Books than in Observation of Symptoms that betide sick persons.

Sylvius de
le Boë, p. m.
402.

XLII. I think the inward Cold of the head is caused by Vapours breeding Cold, carried to the head together with the blood, partly indeed by their austerit rendring the blood inept to part with its spirituous parts, and partly contracting the external substance of the brain, or straitning its sinuous pores, and so in some measure at least denying a passage to the most spirituous part of the blood. Then is the time to sweat; for by this means the Vapours, that produce the troublesome Cold are dispersed. But in this case, as in the foregoing, it is hurtfull to bleed, purge or vomit.

Item, ibid.

XLIII. The nervous Liqueur gathered among the Fibres of the *Meninges* and other parts of the head, sometimes by its proper incongruity, whereby being sower or otherwise degenerate, it becomes disproportionate to the Fibres; sometimes, for that it ferments with some other humour, viz. the nutritious or serous, flowing thither, doth vellicate the containing parts and irritate them into spasms and painfull distensions. When it is thus morbidick, it is either peccant in the whole mass and inflicts its mischief on the head predisposed: or in it self innocent, is so affected within the fibres, that it is perverted, and so secondarily it becomes morbidick: The cure of which then depends upon the restitution of the containing parts, namely, if the weakness of the fibres, or the hurt conformation be amended, the humour that bedews them will immediately be without fault. In the mean time, if, being degenerate in the whole mass, it impart its mischief to the head prepared for aking, such Medicines and method must be used, as may reduce the nervous juice to its due crasis, that as it gently traverseth the fibres it may not irritate them. For which purpose neither strong Purges, nor large and frequent Bleedings are convenient, because they put the blood and humours into violent motion, and waste the strength; and therefore impress a greater acrimony upon the peccant nervous liqueur: Yet gentle Solutives and a little bleeding will sometime doe service, that the bowels may be cleansed and the mass of blood a little purged, and way may be better made for succeeding Medicines. Now the Medicines that render the nervous liqueur more amicable and benign to the Membranes of the head, which use to be disturbed by it, are such as are vulgarly held to be Cephalicks, scil. whose particles being active enough and also thin and subtile, do pass the blood without turbulence or tumult, and then insinuating themselves into the nervous liqueur, they gently astuate it, and so make the nervous ducts to open themselves, so that all sensible and motive bodies do more freely irradiate the animal spirits, and inspire them with Faintings, Spasms or Distensions.

Willis, cap.
de Cephalak-
gis.

XLIV. Sometimes the nutritious juice is the cause of a periodick Head-ach, scil. inasmuch as it being mixt with the blood, and not rightly assimilated,

lated, by reason of the disagreeing particles it gives it a turgescence, so that the blood boiling up into the head, leaves its Refuse in the *Meninges* and those parts of them that were predisposed, and so irritates the Fibres into painfull Spasms. For this very reason I have known several after the Small-pox and Measles, and other Fevers or Sickneses, whereby the mass of blood is usually vitiated, who were subject to the Head-ach every day, viz. so many hours after eating, sometimes sooner, sometimes later; first a flushing in their face, then a fullness and pain in the head did invade them. Moreover, they were more grievously plagued upon drinking Wine or eating windy Meats: The fit of the Head-ach was more or less distant from their food, altogether as the Chyme began to grow turgid either upon its first entrance into the blood, or after some little stay there. After provision for the whole, Medicines which restore the crasis of the blood, doe much good, such as Antiscorbuticks especially; and Chalybeates.

Idem.

XLV. One infected with the Pox was cured by a sweating Diet and anointing with Mercury, after which for some time he seemed free of his Disease: But afterwards the same Distemper returned, and he was again cured by using a Sudorifick decoction a good while, and then by a *Suffilus* of Cinnabar he seemed again to be perfectly cured: Yet afterwards he began to be afflicted with a grievous Pain in the left side of his head, which in the changes of seasons, especially at the coming in of Autumn, tormented him sorely, and kept fixt in the same place like a Nail. Many Medicines were tried to no purpose. I judged this grievous Head-ach did proceed from the reliques of the Pox that was not perfectly cured; yet that its next and immediate cause, or at least the fomenting and encreasing cause of the pain, besides the Venereal virulence, must be either a sharp and biting humour flowing to that part of the head, or Mercury it self gathered in that part of the head, or a *Caries* in the skull. That I might have respect to all these causes, 1. I prescribed universal Evacuation by bleeding and purging with an Apozeme for four days; then a Sudorifick diet of a Decoction of *Guaiaicum* and *Sassa* for thirty or forty days: for often a Pox that could not be cured by Mercury, has been cured by long use of the Decoction. And if the Head-ach came onely from virulent humours, vellicating the membranes, it could onely be cured by a long diet. If it would not yield to the long use of the Decoction, we ought to see, whether no Mercury were gathered in the part, which may be known, if a Bullet made of Gold be put deep into the left Nostril, and if after some stay in that place it be taken out white, it is a sign there is Mercury: You may try the same by covering a cephalick Plaster with Leaf-gold, and laying it on the part grieved: for, if the Gold grow white, it is a sign there is Mercury, which may be got out by degrees, if a thin plate of Gold be always worn upon the aking place, and a golden Bullet be often put into the Nostril. If by this means neither, the pain do cease, the place must be laid open and bored; for often the *Cranium* is corroded by sharp, virulent humours, and a *Caries* is got into it, when the Skin remains whole: And though no *Caries* should appear; yet the Trepan often does good, by drawing out the virulent matter, that was gathered upon the *Meninges* of the Brain.

Riverius, Cent. 2. Obs. 51.

Medicines especially made use of by eminent Physicians.

Acus, Te-
trab. 2.
sett. 2.

1. *Euphorbium* has a natural power to cure the *Hemicrania*, thus used. Mix it with Vinegar, if the right side ake, anoint the left; if the left side ake, anoint the right; it gives present ease. ¶ Give French-lavender boiled in Water, or in Water and Wine, as the best Remedy in all Head-aches: Or, beat wild

Docks and Galls together, apply them to the Temples, and you will presently cure.

Id. c. 50.

2. If you dip a crust of bread in the Phlegm of Alum mixt with the Phlegm of Vitriol, and lay it on your head where it akes, you will admire the effect.

Agricola in Poppium.

3. Bitter Almonds blanched, beaten up with Vinegar and Oil, and dropt on or applied to the forehead, like an ointment, are very good in the beginning of an Head-ach.

Donab. Altim. l. 1. c. 10.

4. There is a singular Remedy for the Head-ach lately found in England, made of the Walnut-tree. In the beginning of the Spring, before the Leaves bud out of the Walnut-tree, they dig up the Earth round the Root, and having cut the Roots, they draw out the Sap, and give a few drops of it in the Head-ach with great success.

T. Bartholin. cent. 3. biff. 97.

5. I set a great Value upon this Epitheme, made of the Flower of Sulphur, tied up in a Rag, and boiled in White-wine, till it grow white: for it gives present ease to the most violent Head-ach.

Claud. Decadatus.

6. An Ointment often tried by me in great heat and pain of the head. Take of Oil of Violets, Roses, each 1 ounce, Vinegar half an ounce, Camphire 2 drachms. Mix them; make an *Oxyrrhodion*, apply it to the forehead and often repeat it.

Leonet. Faventinus.

7. This vulgar Remedy hath been often tried with great success; Take a Turnip, roast it in the Ashes, when it is roasted, cut it in half roundways, then take that half the herb grew to, and apply it behind the Patient's ear as hot as he can endure it, when this is cold, take the other half and apply it hot, and repeat it till the Wind be dispersed and the pain removed: In the Tooth-ach caused by Wind it is very good used after the same manner.

Joh. Fienus, de Flatibus, c. 14.

8. One in a continual Fever had a great pain in his head; I ordered Yeast with Salt and Soap spread upon Colewort-leaves to be applied to his feet, his pain went off; I have tried this in several others.

Forestus, obs. 16. l. 7.

¶ In the Head-ach, caused by the heat of the Sun, I ordered Oil of Roses to be applied, which is one of the best Remedies, if it be made of crude Oil, and Roses alone, without the Leaves; it is also much better, if it have no Oil in it.

Id. l. 9. obs. 14. c. 2.

9. Kernels of Peach-stones beaten together with Betony-water and Vervain, helps wonderfully in the Head-ach from a cold cause.

Grulingius.

10. It is confirmed to me by most faithfull experience that 10 or 12 Leeches set round the Temples, when they have drawn much gross blood away, the Patient finds relief: and this is a much safer remedy than cutting an Artery.

Hearnius.

11. This is commended as a Secret by some, which like a Charm asswages all Head-aches. They bid you set a Dish upon the Patient's head full of fair Water, and pour about two ounces of molten Lead into it, which being done, they hope the pain will be removed with the Dish.

Rohinc.

12. Among external Anodynes in the hot Head-ach, the Juice of Creyfish is commended from the often experience of Dr. Michael, if the Juice of Vervain be mixt with the Juice of the Creyfish, and Cloths be dipt into it and applied to the Temples and Forehead; it is good also in the Malignant head-ach and the Hungarian disease.

Phil. Jac. Sack Gammalogia.

13. Take 2 or 3 Tiles and heat them, pour some of the best Wine upon them, and let the Patient receive the smoke into his mouth with his head covered: This must be done twice or thrice in 24 hours, thus I have cured several.

Arnold. Villanovanus.

Capitis

Capitis Vulnera, or, Wounds of the Head.

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I. **I**T is customary with unskilfull Chirurgeons, when they are called to cure Wounds, that reach not beyond the Pericranium, to open all Wounds whatever in the head with a large Incision in the figure of a Cross, and (that I may use their own phrase) to lay open the Skull, to the end they may know whether it be broken or cut. From which mistake of theirs many Inconveniences follow: Because, first, it protracts the Cure, for if such Wounds or Contusions were cured according to Art, they would be well in eight, or at farthest ten days, though they were very large; whereas

these fellows scarce cure them in two, or sometimes three Months. Besides, while they open the Wound to the Skull, they endanger the Patient's life, because sometimes, before he is cured, they must of necessity take out no small portion of his Skull, it being corrupted by the open Air getting to it, which otherwise had neither been corrupted nor hurt: And it often happens, that not onely the Surface, but the whole Thickness of the Skull is corrupted. One had a Wound in the right side of his head laid open in form of a Cross three Inches square, when there was not the least sign of a Fracture: whence it came to pass, that not onely so much of the Skull as was laid open, but a greater Portion on all sides, was corrupted. ¶ If it chance, that upon a blow a Patient lose his Understanding, with a deprivation of sense or motion, unless the other symptoms enumerated by Hippocrates do also appear, there is no danger of Life: and therefore you must let alone all manner of operation, as laying open and trepanning the Skull: for I have seen some, who, having their head hurt by a fall or a blow, and this Symptom onely appearing, were well the next day. ¶ Such a Contusion is with admirable success cured by applying the Skins of new killed Animals, especially of a Dog or a Mouse; for if they be applied while they are yet hot to the contused place; and left on for 20 hours or more, they notably disperse the Tumour: I prefer a Lamb's skin, being both easily come by, and having as good a faculty to digest. By this one and well experienced Remedy I have cured several children and grown persons.

II. There are often in children under 7 years old Contusions, very like those faults we see in brass Vessels, so that when the Skin is not hurt, and when the Table of the Skull behind is not crackt, yet that before is often hurt: for the tenderness of the Bone at that age sometimes is the Cause, that the Skull may be depressed and yet now and then not hurt otherwise, oftentimes also that it is both hurt and broken, and that the Skins encompassing the Brain are broken. Lately a Boy about four years old was brought to me to be cured, who had received a violent blow upon the coronal Commisfure by the fall of a wooden Shutter from a Window, by which blow both sides of the Bone and both the Membranes were broken, and also some part of the Brain came out three several times in the process of his cure: yet the Child was cured without laying open the Wound, and without any loss of his Skull; and he was not above twenty days under cure. Now, to cure such Compressions in Childrens heads, there is no need of any more laying open the Wound, than what is made by the blow it self: And if there be no Wound made, nothing must be opened, no, not if one certainly knew that all the Bones were hurt and broken to pieces. And this will be the safest way of curing such Wounds: for whatever useth to be done contrary to this method, we have now mentioned, it hath most certain danger. The way of Cure is this, if the Contusion shew no manifest Wound, in the first place we use this Remedy; Take Oil of Roses, Chamæmil, each half an ounce, Oil of Myrtle one ounce, the White and Yelk of an Egg, with a little Bean and Barly-flower of each alike, Myrtle powdered 1 ounce: Mix them all into the form of a Plaster, and lay it on the bruised place. And the next day we use another Plaster, but scrape the first clean off. Take of the Drofs in Beehives, or of new Dreggy Wax, common Honey, each 1 ounce, Powder of Bloud-stone, Pumice-stone, each 1 ounce, of Cummin-seed, Wormwood, common Bran, each 2 drachms: Mix them upon the Fire and make a Plaster, to be laid to the depressed place, two inches broader than the place round about: The efficacy of this Plaster is so wonderfull, that within twelve days it raises the contused and compressed Bones; and, I think, for

this purpose, there is no Medicine more effectual. But if, beside the Depression and Fracture of the Bone, there be a Wound also, it must first of all be cured with the White and Yelk of an Egg stirred together, applying soft and thin Raggs, Tow and Bolsters, wherewith the Wound must be covered. And the next day we must use the Balsam often commended by us. The Wound must be gently anointed with a Feather dipt in the Balsam, whose present virtue in this kind will easily be seen: for it wonderfully concocts, mundifies, and breeds flesh: but it must be melted, yet not too much, lest it should burn the Patient, or the Medicine should lose its virtue by over-heating, (but this you must have a care of, that you take not out one bone, though it were manifest they were all broke to pieces) and you must cover the wound with dry lint, and press it not too much: Upon this you must lay the Plaster hot, that we but now described, which to the great delight and admiration of him that cures, sucks out all manner of Pus, that is bred within, and also quickly raises the compressed bones, and restores them to the same state they were in by nature: For I safely affirm I have frequently used this and the like method of cure, and do attest, that by God's blessing I have cured them of most grievous wounds.

III. On Saturday the 28. of February, 1679. a Child about four years old, the son of Mr. John Stone of Plymouth, had his head crushed between the heavy end of a Field-gate (so heavy that a Man could scarce lift it) and a small Stone, that stood above the level of the ground; this stone bore against the left Bregma somewhat above the Ear, opposite to which on the other side, about the same distance from the Ear, a pin of wood an inch square, that stood out half an inch from the gate, being forced by the weight of the gate, made a small wound, but a very great depression; it bled much, the Child cried a little, did not faint, nor convulse, only vomited two or three times. I presently laid it bare, and upon examination by my fingers, found where this little wound was, and that the Skull under it was largely depressed, I shaved it, and entering my Probe at the wound, I found the Scalp separate from the skull a great way, and a large depression of the latter. When I withdrew my Probe some of the Brain came out upon it: I entered my Probe again with the eye forward, and brought out as much as two pease; and upon dilating it several parcels of Brain appeared among the blood. I dressed it up with Dossils, dipt in *Mel rosatum*, and Spirit of Wine made warm, and covered all with a Plegent of *Linimentum Arcei*. I examined the rest of the Head, and found on the other Bregma an *Echymosis*, and under it another depression. I shaved off the hair from thence also, and with the same Razor excised a piece of the Scalp as big as a shilling, which laid bare the depression and fracture, which was such as I could not then elevate, I filled this with dossils of dry Lint, covered with a plegent of *Arceus Liniment*, over all laid a Plaster, rolled up the Head, and laid the Child (who endured all with incredible courage) to bed, his head bolstered as high as he could well lie. I gave the Father a dreadful Prognostick, and desired the assistance of Doctor Spenser. That evening I gave the Child a Clyster, which wrought twice or thrice, I gave him something Cephalick and Diaphoretick, to comfort the Brain, and prevent Coagulation, or other mischievous effect of the Contusion. The Child slept quiet, and sweat well. The next morning the Child being brisk and lively, the Doctor came, a fomentation and all things ready, he being taken up, and held on a woman's Lap, I cut off all the hair close to the head, and opened the left wound first, where we found a depression with a fracture. I could not enter an Elevatory, and therefore at that time left it as it was, and dressed it up as the day before. Opening the other wound, and taking out the dossils that I had laid in the day before, several small portions of the Brain

shewed themselves among the grumous blood, and on the dress; and a prodigious piece of skull beaten in, and wholly separated from the rest, and (which was a very ill circumstance) the outward Table being broken narrower than the innermost, made the deepest piece larger than the hole it had made, so that at that time we could not get it out. So that having cleared the part of Matter, I then onely made yesterdays incision into a Cruciate; we dressed him as before, I rolled up his head upon a Stuphe, dry wrung from the fomentation. The Clyster was repeated every day for some considerable time; his diet was Water grewel and Chicken broth, with some proper things boiled in them; his drink was sometime small bear with a tost and Nutmeg, sometime his Cordial Julep. The second night the Child slept indifferently well. We again opened the left side, and after some attempts in vain to raise the depressed Skull, we strewed Cephalick powder on it, and dressed it up with dry plegents of Lint as before. Upon opening the other, we saw again some little owzing of the Brain among the matter: we now resolved to extract the piece of Skull. After some little time I did it, by turning it so, that the narrowest part of it might come to the broadest of the Gap, when holding it fast with a Crow's bill, it easily came forth, and left a dreadful breach. The wound on the Membranes we saw plainly, with some effusion of the Brain, but it happened that it was below the edge of the found Skull, so that it became succored thereby, and (the Child being young, the Membranes more soft, and apt to consolidate) coalesced the sooner, for after four days we saw no Brain. We made our dress this time after this manner. We had a good guard of hot Stuphes, to defend from the air, and having cleansed out the Part, and smoothed the uneven edge of the Skull, we dipt a Syndon (that is a piece of fine cloth, bigger than the extracted Skull, having a thread fastened to the middle to draw it forth by) into a mixture of warm Spirit of Wine, Honey of Roses, and Balsam of Peru, and with a Probe thrust the edge of it between the Skull and Dura Mater. Upon it was strewed Cephalick Powder, covered with dry Lint. Then I snipt off the lips of the Cruciat, and, laying on a plegent, armed with *Arceus Liniment*, rowled him up. This day we ordered *Tinctura Ambra Grisea* in his Cordial six or eight drops at a time, as there appeared need. The next day, being the fourth from his hurt, we found he had had a good night. I shaved the whole head, anointed with a Cephalick balsamous liniment, and laid on a Plaster of equal parts of *Opodeldoch* and *Empl. de Betonica*, then dressed the wounds as before, and covered them with Plasters made of equal parts of *Diapalma* and *de Betonica*. The Skull scaled but slowly, as is usual in Children, therefore towards the end we used more drying Cephalick Powders than ordinary, to prevent a fungus and quicken desquamation, mixing *Guaiacum* Bark in Powder. The Dura Mater united in four or five days, the union was confirmed, so as we used digestives after five more, digestion was procured in a week after. And in about six weeks from the first dress the Skull scaled, the flesh grew up from the Dura Mater, and under the scalings of the Skull, and became level with the skin; it would sometimes be exuberant, and soft or spongy, before it could be cicatrized, a gentle touch of Roman Vitriol, and sometimes strewing prepared *Lapis Calaminaris* thereon, shrank it up, and cicatrized the left wound in seven weeks; but the right remained three months. For it was not onely difficult to make a final desiccation thereof, because of the moisture glecting from within the Cranium, but necessary to delay it, that the matter might discharge itself, as it gradually decreased. In performing this last part I used a very desiccative Sparadrap Plaster, (that is, made by dipping cloths in it when relented) which being laid double, served not onely as a desiccative and a defender from

Arceus de
cur. vuln.
h. l. c. 6.

James Tonge,
Wounds of
the Brain
proved cu-
table.

from

from confluxion, by its gentle adstringency, but by its stubbornness and strength defended the part from hurt by blows, falling, and such other accidents, as Children are liable to.

IV. The depression of the Skull has been cured in several, by setting a Cupping-glass with much flame upon the Depression, after once or twice being let Blood, sometimes with incision, and much scarification, and sometimes without them. A certain man was struck with a stone on the left side of the head, and was left for dead, blood came out at his mouth and nose, he could scarce speak or open his eyes. If one pressed the depressed part of his skull a little with ones finger, he was troubled with a reaching to vomit. I ordered him to be shaved, and a large Cupping-glass to be applied with much flame, which, though it was set on the sound and solid parts, put the Patient to much pain: After the Cupping-glass was taken off, and incision made upon the part affected, and the Cupping-glass was applied again, he found great ease, and his pain was over, after which he began to speak, and knew those about him: And although I had taken seven or eight ounces of blood away by cupping, yet the next day I order him to bleed again, and so in a few days he recovered.

V. Whether should Wounds of the head be healed by sowing, or by regeneration of flesh? The best Chirurgeons neglect sowing, lest the matter kept in under the sowing corrupt the *Pericranium* and the skull, and so pain and other symptoms follow; also for fear of hurting the *Pericranium* in sowing, which in all likelihood cannot be without hurt, when the whole skin is cut. And sowing of the Flesh is not properly opposed to generation of Flesh, nor is the cure by agglutination and future the same thing; for the agglutination of the skin of the head, which requires a long time, can never be, without generation of flesh, which generation of *Pus* doth precede, wherefore it is necessary, that new flesh should grow in the room of that which turned into *Pus*. Let the Chirurgeon therefore make it his business first to close the lips of the wound by binding, applying necessary medicines, and let him leave the rest to nature.

VI. Whether when the Skull is fractured under the whole skin should this be cut? *Vidus Vidius* reports, that *Perusinus*, a famous Chirurgeon, did by long practice observe, that more of those are saved, who are cured without cutting, by lenient and drying Medicines, than of those whose skin is cut and their bone laid open; and herein he shews that there is a vast difference between a fractured skull bare, and one covered with the skin: For if the skull be uncovered, if it be left without cutting, the humour that falls upon the Membrane of the Brain, cannot be dissolved by the heat which expires; and therefore putrefying it kills a man: But when the skin is whole, the heat expires not, therefore it can digest the *Sanies*, and solidate the Bones, which we daily see in other fractures, that are covered with flesh and skin. This opinion may be allowed of, if onely a small quantity of blood be poured under the *Cranium*; if no broken bone prick the membranes; and if the broken skull compress not the Brain. But if there be store of blood, if the corruption of the parts underneath by the *Pus*, be feared, if a membrane be prickt or compressed by a broken bone, according to *Paulus*, *Celsus*, and most Chirurgeons minds, the skin must be cut, that the fracture may lie open, and other things may conveniently be done as they ought: For Nature is not able to rectifie such faults; and granting that the *Sanies* could be drawn through the skin; yet the small bones and scales, that stick within, are not easily drawn out.

VII. A certain person fell backwards from on high, and remained as if he had been quite dead. Wherefore by the Advice of *D. Pimpernelle*, and *D. le Juif*, after his head was shaved, a cataplasim of Bean-flower was applied all over it: And because the case required haste, (for the Patient had lost his speech) that the Cataplasim might sooner drie, they got hot cloths

applied to the cataplasim for the space of six hours: when it was dried and taken off, the figure of the latent fissures of the skull was found plainly delineated on it: for the cataplasim will not grow dry in the places of fissures or fractures: And a great fissure appeared in the middle of the *Crotaphitus* Muscle.

VIII. A little Girl fell down a pair of Stairs, and knockt the hind part of her head against a stone step, so that it made a great depression of the bone with contusion onely: And when her Parents would not yield to cutting, nor the necessary operations, but would onely have Medicines applied proper for the inflammation and contusion; she was beyond expectation cured by Nature, yet there remained a notable depression of the bone. We need not therefore be much afraid for Children bruised after this manner, by reason of the softness of their skull.

IX. *Aquapendent Chirurg.* l. 2. c. 8. shews when Trepanning the skull may be used. Trepanning (saith he) may be used in these two Cases. 1. If a descent of the matter be feared. 2. If there be not a sufficient outlet for the matter. On the contrary, if the Fissure be open, or the fracture reach not through the whole bone, and if there be no contusion, so that there is no fear of *Sanies* contained within, the skull must not be opened, nor the *dura meninx* exposed to the air to no purpose. We must observe that if the Fissure or seat of the Instrument descend to the middle part of the skull, scraping will not be sufficient, but we must proceed to trepanning, although no other symptoms appear; upon this account, because the purulent matter running from the lips of the wound to the middle part of the skull, doth also by its vessels penetrate to the membrane also, betwixt which and the skull it being gathered, causeth death: I have observed this in several, who for this reason were trepanned, that they all recovered.

X. We put the Trepan to the broken or contused skull, that partly we may raise the depressed bone, partly that matter or blood stagnating in the *dura meninx*, may, when the hole is made, be evacuated: Yet *Peter Marchetti* saw matter evacuated without the Trepan. ¶ A young man falling from a window contused his skull, which caused Convulsions and other symptoms: The skin, after incision made, sweated out *Pus* by the Pores of the Skull, as sweat useth to come through the skin. ¶ A Boy having contused his Skull, voided blood at his Nose, Mouth and Ears; his Mother refused the Trepan: The Boy being neglected thirty days, an abscess and inflammation arising in his head, *Pus* ran out at his Nose in great plenty. *Marchetti* being called at last, performed the opening of his Skull with a Trepan excellently well indeed; but because thirty days had past, the Boy at length died: for according to *Hippocrates*, in wounds of the Skull of this nature we must not tarry four days. The nature of our Soil and Clime is otherwise, and doth not exactly agree with the seasons of *Hippocrates* his Air, nor will admit of such generous operations: Our colder air retards the quickness of the inflammation, and stronger bodies, if a little time be allowed them, do with Nature's assistance raise the bones of the Skull of themselves: For I have seen profound contusions of the Skull cured in our City without a Trepan, onely by applying *Emplastrum magneticum* & *de Betonica*. ¶ A Walker in his sleep, at his full growth, and of no small bulk of body, in the Summer 1673. fell from the second story upon a flint pavement, he fell not with his whole weight upon his head, but the trunk of his body first bore the chiefest force of the fall, otherwise he had hardly escaped the abolition of all his animal actions, and immediate death; yet in the mean time he had grievously knockt his head, for his Skull was cleft, not without effusion of blood within it, which is the perpetual concomitant of Fissures: The *Italians*, and other hotter Countries, would immediately have taken the Trepan in this case; and so would the excellent *Mr. Burgomaster* have done, but that the Patient and by-standers were absolutely

P. Borellus,
cent. 2. obs.
20.

Marchetti,
obs. 5.

Marchetti,
obs. 15.

T. Bartholinus,
cent. 2.
hist. 41.

D. Des
Grand. Pres.
Observ. 3. a.
pud Riveri-
um.

Sennertus.

Idem.

absolutely against a Remedy not usual in these parts; and which to most men carries terrour in its very name, and so hindered his Intention. He endeavoured therefore to stop any farther profusion of blood within the Skull, and to consume what was already extravasated: He diminished the blood by repeated letting of it: He rubbed all his back with discutient Oil: He wrapped his Body in Lamb-skins just slain: He applied Cephalick bags boiled in Wine to his head: He denied him Wine: He gave him a decoction of Harts-horn to drink: He restrained the motion of the blood, disturbed by the fall and grumous blood, that was beginning to be inflamed here and there all over the body, and so made very impetuous: By taking away some quantity of blood he made the veins as it were hungry, that they might suck back what was effused more greedily; to which purpose also pertained his thin and cooling diet: By giving a Traumatick tincture, and outwardly applying bags stuffed with Cephalick herbs, and boiled in Wine, he so disposed the extravasated blood (which would have become grumous, and might have caused much damage by its putrefaction) that it could enter either the blood-vessels, or the pores of the Glands. And he did all this not without good success, nor without a precedent; for the same course, without trepanning the Skull, has often succeeded as well as one could wish. I cannot believe, the extravasated blood passed into thin air, and vanished like a vapour; for the thickness of the Skull, and denseness of the *Dura meninx*, would hinder that; which is the reason, that it pertinaciously detains even mere water in the Dropick of the head, so that the wit of Man cannot get it out without opening, and that is very dangerous. We see daily, how Swellings, half as big as a Hens egg, arising in the foreheads of little children from violent falls, and growing black and blew with suffused blood, do presently sink by applying cold Iron; or if this repercussion at first be neglected, by applying a piece of warm flesh, how in a few hours space they vanish, without any manifest evacuation.

Wepferus, de
Apoplexia, p.
340.

XI. Although Instruments are often applied to the Skull in fractures or fissures; yet sometimes they may properly be applied to it whole, especially if there be fear that any veins are broken: For by this means not onely the effused blood is got out; but moreover inflammation, putrefaction, delirium, a fever, and other Symptoms are prevented.

Tulpius, lib.
2. obs. 2.

XII. One had got a wound in the fore-part of his head, which the Chirurgion, by reason there were no Symptoms, cured in fourteen days time, according to the first intention (Anno 1629. in the month September.) Thus cured, he came to *Ulm*, Anno 1639. in March, and complained of a great pain all over his head, of a *Vertigo*, dimness of sight, and a Palsie in his right Arm. Now, by reason of the great suspicion I had of a fissure in his Skull, twenty weeks after he had received the hurt, I made a triangular Incision into the skin and *Pericranium*, upon the *Sinciput*, and I sufficiently dilated the wound, separating the *Pericranium* from the bone, and applying Lint dipt in a Stegnotick. On the 13th day of March, when the blood was stopt, I found the Skull cleft, and I bored it twice with a trepan, upon the edge of narrowest part of the fissure, and took away the interstice between both holes with a turning Saw. The matter being evacuated, that fell by the fissure upon the *dura mater* of the brain, the said Symptoms ceased, and the Patient in a months time recovered.

Scultetus,
Armann, obs.
23.

XIII. A Man of Threescore had a blow on the left *bregma*, with fracture and depression of the Skull: I was called to him on the 10th day in the evening: I found him in a Fever, delirious, and speechless: having given the prognostick, I undertook the cure: I made a Cruciate and laid open the Skull; the

Fab. Hildanus, cent. 4.
obs. 4.

next day having taken out a few bones, that were separated from the first table, I trepanned him. And so he that was given up for lost, happily escaped.

XIV. One was wounded on the right side of his head, the wound reached all over the *Cranium*, and Membranes themselves, so that a piece of the *Lamina vitrea*, where the wound did almost end, did so prick the Membranes and Brain, that besides other Symptoms, there was this peculiar, a Palsie in the opposite Arm, and the Tongue. Beside common Medicines, the next day I trepanned the Skull in the midst of the wound, but with no relief; and therefore I resolved to try a new trepanning, but in vain: Then I tried two more, being fully assured that the Membranes were hurt, and the brain vellated by some piece of bone, which I found true: for in the very operation I hit my Trepan against a piece of bone, which I took hold of, and drew out with a pair of plyers, to which a portion of the *Marchetti, Membrana pia*, and the brain, were annex: Upon which, within half an hour, he recovered his Speech, and the use of his Arm, and lived long in good health. *obs. 5.*

XV. We must observe, that the Trepan and the Elevatory must never be applied to a bone that is totally broken off, lest by compression of it the Membranes under it be hurt. Therefore they may be applied to the firm bone; but as near as may be to the fracture, that less of the Skull may be taken out, lest the brain, deprived of its bony cover, get some hurt. Nor may you follow fractures, or fissures, if they reach any thing far, to their very end; you must be content to procure a passage for the *Sanies*, and with the taking out of so much bone as pricks the Membranes; for when a *Callus* is bred and grown under, Nature will make up the fractures of the Skull, as she uses to make up those of other bones: For which purpose, she, by a singular providence, hath filled the two tables of the Skull with a certain alimentary and sanguineous matter, that herewith, as with Marrow, she might repair the hurts of this bone. The truth of this appeared lately in Mr. *Grolo's* Servant, who suffered a grievous fracture upon his coronal bone by the kick of a Mule. When I understood this, I made a triangular section, that so I might apply the Trepan: The day after I had bored the bone, I thought to take it out; but as I was trying to get it out, after I had separated it with the Trepan, I found, by the looseness of the bone yielding under my hand, an enormous production of the fracture; for it reached from the middle of the forehead to the outer corner of the eye: Therefore laying aside all thoughts and endeavours of taking out the bone, I thought it sufficient for my Patient, if I raised the depressed bone a little higher, for then it would not be troublesome by compressing the thick *Meninx*, and there would be sufficient passage for the matter by the division, which the Saw made. Upon this, at length he recovered, onely he lost the fight of his eye next the fracture. *Up-Parvus, l. 9. c. 6.*

XVI. *Carpus*, in his Chapter of the signs when a bone pricks the Membranes and Brain, saith thus; "That the Skull is nourished by the veins of the *dura mater*. I saw by experience in a Boy twelve years old, that was kicked by a Mule, and had as much of his Skull broke as a large Wafer, pressed in, and every way separated, the thickness of a Knife. When I saw the bone depressed, I was willing to have totally raised it with apt Instruments; but in raising it, I saw one notable vein broke, that bled much, from which I knew the danger was great, and I let the bone alone, because it stopt the blood, thinking to remove it in time; and in curing, I see the bone always of a good colour, and there were no bad signs, and so I proceeded in the cure afterwards, and I saw the bone close up on the edges, and I let the bone alone, and so he was perfectly cured; and I have seen others

Parvus, l. 9.
c. 7.

"others both before and after which I will not speak of. ¶ When these veins, by which the *Cranium* is nourished, are torn, it falls out, that they are retracted inwards, and the blood runs from them, which putrefying, and no manifest hurt in the bone being seen at first; but at length cruel Symptoms arising, the Patient dies. Besides, it may so happen, that though no veins be broke; yet by the violent blow, and concussion, much blood may be drawn into the veins, that lie under the Skull, and the blood being forced into, and retained in a narrow room, and not duly purged, distillation being prohibited by its standing, and it conceiving an extraneous heat, Inflammation ariseth, which is usually attended with death; though the wound appear very slight to the beholders eye.

XVII. It is the common opinion, if both tables of the Skull be broke, that the Skull must be opened, that there may be a passage for the *Sanies*; but others think application of Medicines more proper than the Instrument. 1. Because by Medicines nothing more is destroyed, as is by manual operation; but what is broken, is presently restored. 2. Inflammation and other things often follow opening of the Skull. 3. Inflammation of the Membranes of the brain is cured onely by Medicines, and not by manual operation. 4. There are Medicines that draw out Arrows, Thorns, &c. Why not *Sanies*? 5. Many have been cured onely by Medicines. I grant this to be true, if it certainly appear, that the Skull is neither broken nor deprest, and that there is nothing which hurts the brain, and but a small quantity of *Sanies*; which the Symptoms do shew: But if there be a great quantity of *Sanies*, or if the brain or membranes be hurt by the Skull, opening must by no means be omitted; and it is better to prevent those Symptoms, which if they do follow, will render the operation more difficult and dangerous.

XVIII. We must take notice, that if it chance by a violent blow and great wound, that a portion of the bone should be so cut, as to be wholly severed from the rest of the Skull, and hang onely pendulous by the *Pericranium* and Muscous skin; it must not be pulled from the *Pericranium*, nor be cast away as useless, but it must be restored to its place and posture, that when the *Callus* is bred, it may, by the power of Nature, be glutinated with a kind of bony cicatrice, as is noted by *Celsus*. I found the truth of this thing not long since in Captain *Hydon*. The middle portion of his coronal bone, three inches long, and as many broad, was so cut off with a strong Sword, that then it had no coherence with the neighbouring Skull, but scarce sticking to the *Pericranium* and Muscous Skin, it lay turned over upon his face, and gave us a prospect of the *crassa meninx*: Therefore I was going to pull it from the skin and cast it away, unless *Hippocrates* his Precept had come in my mind, which bids us have a care of disarming the brain of its cover, and leaving it naked: Wherefore first of all I wiped off the blood, that had fallen upon the thick *meninx*, whose motion I could observe by my eye; then I restored the piece of the bone turned out to its place, and tacked it to the upper part with three stitches with a Needle; and that there might be a passage left open for the rest of the *Sanies*, I filled the edges of the wound with Liniments: by this art it came to pass, that, though he had many large wounds in other parts of his body, yet through God's Mercy he recovered. Which may be a Precedent to us, that nothing, neither of the *Cranium*, nor the *Pericranium*, no, nor of the Muscous Skin must be cast away, except necessity require it, and much less that the Brain should be left naked of its cover.

XIX. Let not the Chirurgion that trepanns the Skull imitate *Glandorp*, who holds on boring, till the piece that is cut out of the Skull stick to the Trepan; but when the piece of bone almost cut out

begins to give way, having put in a weak elevator, let him pull it out with a pair of plecters.

XX. If the Skull being laid bare, be either altered by the ambient air, or grow black, then it must be scraped away, either to the change of colour, or till it bleed, that is, when good *pus* appears, and the wound cleanseth: If the Chirurgion observe this time, after once scraping, and sprinkling with *Cephallick Powders*, and treating the bone with dry *Lime*, he will find it the next day covered with flesh. For we must not listen to *Jac. Berengarius*, who, *l. de fract. Cranii*, c. 42. orders the bone to be rasped superficially every day; because the derasion made at the foresaid time is sufficient: but if it be used before that time, it must be often repeated, not without danger to the Patient, because by this means the rasp will at length come to the *Diplois* by degrees; They that are too timorous, leave the desquamation of the altered bone to Nature's management, but they protract the cure.

XXI. If the fissure of the Skull be deep and broad enough, to let the matter purge freely from it, neither trepanning the Skull, nor violent dilatation of the wound with a Knife is proper: Therefore *Chalmeteus*, *l. 2. Enthir.* c. 14. doth rightly judge they deserve censure, who not onely in a little fissure of the brain (although it be not deep) but also in a large one, that is open enough, do boldly use the trepan: by which no small error of theirs the cure is protracted a very long time, to the Patient's great damage, and the Physicians discredit.

XXII. I think we should have the same opinion of all those that dilate every wound of the head; whereas section should onely be used, when we know not but that the Skull should be trepanned, or rasped. What should be done, when the wound of the head with a large fissure, refuses the rasp and the trepan, *Scultetus*, *parag. 6.* doth shew; confirming it by the example of one, whose left side of his *sinuiput* had so large a fracture in it, that he could easily have put his fore-finger into it; to which fracture a *Phlegmone* of the *Dura mater* was joined, which nevertheless, universals premised, vanished in three days, by the diligent use of oil of *Roses* applied warm with *Silk*, and *Hippocrates* his Cataplasma.

XXIII. They proceed without reason, who, in all manner of wounds in the head, make a cruciform section. If the wound be given on the right or left side of the *Sinuiput*, the Chirurgion must dilate it into a Triangle, that, if it may be necessary, he may safely use the Trepan: He makes his section triangular, because the coronal suture, and the right temporal muscle forbid it to be cruciform. He begins the section from the forehead, lest he should cut cross the Temporal muscles, that he should at

XXIV. *Marchetti observat.* 15. denies that the temporal muscle can be cut without danger, as often as the wound or contusion is with the fracture of the bone, for that most who are so wounded do die: yea, he affirms, that a fissure onely of the bone, lying under the temporal muscle, has often caused death. Yet examples are not wanting of its being cut without such danger: *Cattierus*, *observ.* 9. tells, how a young Woman had a contusion without a wound, upon that muscle, against the corner of a Table: upon which she became speechless, with other grievous Symptoms: That the Chirurgion *le Large* did reckon the contusion of this muscle, and the dilaceration of its fibres, and the compression of the *Pericranium*, that involves this muscle, were the cause of these things: Yet because he doubted whether there were a fracture of the bone under it, he made a small incision, according to the dust of the fibres, and a little while after her Symptoms ceased, some sharp *Sanies* ouzing out, which vellicated the part of a most exquisite sense. ¶ And *Borellus*, *cent. 2. obs.* 20. relates, that Count *Breve* had

Scultetus.

Scultetus, Tab. 29. par. 3.

Idem. Tab. 29. par. 7.

Scult. Tab. 27.

Marc. Donatus, l. 5. c. 4. hist. mir.

Sennertus.

Parvus, l. 9. c. 7.

got a large fissure under the middle of that muscle by a fall from on high, and that Mr. Le Juif, contrary to the doctrine of Authours, made a section in the muscle, without any regard to the fibres at all, which he affirmed he had done several times in others; he saith, that when the section was made, the Arteries spurted out the blood, which was stoppt with Astrigent powders and lint; when the Skull was laid bare, there stuck out a pretty large scale of a bone, which the said Le Juif forced violently out with his Spatula, saying, there was no need of any other trepan, when that would doe as well, after which the blood gushed violently out, which when it was stoppt, the brain was anointed; he presently recovered his speech, and had his health well after. ¶ One Smith, sometime a Tanner in Chester, was afterwards a Captain of a Company of Dragoons, which he pickt up in haste, to disturb us in our Retreat from the battel of Worcester. He was wounded by some of our Soldiers transverse the right Temporal Muscle, and was bleeding almost to death, when I was brought up to his Quarters. I sticht his wound, taking the Artery up with the Lips, and, for want of other remedies, dress't it with a little Wheat flower, and the White of an Egg, applying over it a compress prest out of Vinegar, with convenient Bandage. The third day after I took off the Dressings, and found the lips near agglutinated. I being then better provided by an Apothecary from Warrington, sprinkled the lips of the wound with *pulv. thuris & sang. draconis*, and applied a Pledgit spread with *Liniment. Arcei*, and over it *empl. diacalcit.* The second day after I cut the stitches, and applied Epuloticks; and afterward by a dressing or two more cured him: I am sure he was well of his wound, before he had recruited his spirits he lost with his blood.

Wileman's
Chirurg. l. 5.
c. 9.

XXV. It is very doubtfull, when driers, and when moistners should be applied to the *dura meninx*, when it is laid open. Truly since Moistners and Driers are diametrically contrary one to another, it must be of some moment, which of them to use. Some use spirit of Wine, either alone, or with the addition of Turpentine, and such like things, relying on these reasons; that all Ulcers require drying; that oils are hurtfull to the nerves, and all nervous parts, as the *meninx* is; that cold things are not less hurtfull; such as oil of Roses, which is commonly used. Some use Moistners, some oil of Roses, others Pigeons blood dropt in, because through similitude of Temper they foster the native heat, keep off defluxions, and assuage pain, the cause of Defluxions. Now, to determine aright, we must examine the nature of the wound, the body and the clime: If the membrane be not hurt, if it be free of inflammation and pain, and if it look white, dry Cephalicks must be used; in such a case *mel rosatum*, with 4 or 5 drops of *Aqua vite*, may successfully be applied: But if pain and inflammation be feared, and the membrane be not free from hurt, *Oleum rosaceum omphacinum* is most proper, because of its astrigent virtue and moderate cooling, whereby inflammation is prevented, and suppuration quickly promoted. Upon account of the Clime, *Meges Sidonius*, in the hard and robust heads of the Persians, onely used *Isis* (a Plaster so called) the *Italians* dare not use it without twice as much oil of Roses added to it. In respect of the constitution of Bodies, oil of Roses alone is sufficient for the more tender and moist; in drier bodies, such as Seamen, Plow men, the elder sort especially, and such as have curled hair, a little Turpentine, or oil of *St. Johns-wort* may be added. So in Summer, oil of Roses is more proper, in Winter Turpentine. J. Griffonius, as Fabricius Hildanus relates it, made such reckoning of the distinction of bodies, that he made no scruple to use the syrup of *Unguentum Egyptiacum*, that is, the thinnest part, that swims at top, not with lint indeed dipt in it, for so it might run to the sound parts, and breed grievous Symptoms; but he gently touched the superficies of

it with a Painter's Pencil dipt in it. Now, he made use of it in a robust *Swisse*, the Membranes of whose brain were infected with manifest putrefaction; or corruption, which was presently stoppt by help of this Syrup. And the same Fabricius advises us to use such remedies, but sparingly, and to desist immediately, when the violence of the disease is repressed: And he grievously rebukes some Barber-Chirurgeons for using *Oxymel* in wounds of the head, and in the membranes made bare: for by the sharpness of the Vinegar many grievous Symptoms are caused, great pain, then presently inflammation of the membranes, a fever, convulsion, &c.

XXVI. It is doubted whether the *dura meninx* may be cut, to make a passage for the *Sanies* that is gathered upon the *Pia*, or the brain: For when it is prickt, there is great danger of convulsion and therefore of death; which I think to be none, if the Skull be pierced in two places, and the hole so laid open, that a long section may be made upon the hard membrane; and indeed, for this reason, because great wounds of the head, which not onely cut the membranes, but the brain it self, are cured. When therefore it doth certainly appear, that matter is gathered between the two membranes, then we may safely proceed to this operation, however not void of danger; because otherwise, if no remedy were used, death would certainly follow, and according to *Celsus*, it is better to try a doubtful Remedy than none. Marchetti, obs. 14.

XXVII. I would give all Chirurgeons this Caution, in perforation to elevate the *Cranium*, that if possible, they do not pass the *Diplois*: because the perforation of the second table, which is not so thick, but very brittle, leaves some roughness upon the Skull, which afterwards, by pricking the brain, doth cause Pain and other Symptoms. Hildan. cens. 2. obs. 5.

XXVIII. Sometimes Physicians do admire, that the cure of some wounds in the head should be too long protracted: This is often observed to proceed from some little piece of bone, which, unless it be removed, the cure will never succeed as you desire; which I have several times observed, and which *Carpensis* testifies in these words. Because bones are for the most part brittle and glassy, and when a notable fissure is made in the Skull, that reaches inwards, some pieces of the bone fall down upon the pannicle, and they are notable because greater, i. e. with a greater fracture in the second table, i. e. in the inner, than in the upper, and they prick or press the Pannicles. And the Physician in such cases should saw the Skull on the edge, enlarge the fissure and take out the bone, because such a disposition is not otherwise cured. And I had this notable case in a certain man, who had stood for a whole year with a great piece of bone under his Skull, and the wound was remarkably long, and healed all up, but that the end of the wound could never heal or close up; and there were two little orifices, out of which the *Sanies* oozed at least for six months. When I came I laid open the wound, and dilated it both in length and breadth, and with a Saw I removed the edge of the Skull, and I found a long and thick piece upon the Pannicle, which I took out, then I cleaned the Pannicle, and in a short time I cured him, and he lives yet in good condition. Marc. Donatus, hist. mir. l. 5. c. 4.

XXIX. Charles, the Son of Philip King of Spain, falling down a pair of stairs, got a grievous wound in his head: Chirurgeons were called, who bind up the wound, and being intent upon healing it up, neglect the discharging of the *Sanies*: Therefore his whole head swelled like a Puff ball, and the youth lay like one in an Apoplexy. Then King Philip brought *Vesalius* to him, who affirming, that in this desperate case, his onely hope lay in opening the *Pericranium*; and having got leave of Philip, he laid the Swelling open cross-ways, and by degrees evacuated most fetid pus: Then the youth came to himself again, as if he had awaked out of a deep sleep. Schenckius.

XXX. When I practised at the Hospital in Florence, I found it most certainly true in the event, that of 40 persons, whom we have had wounded in a year,

year, scarce five escaped: For there it is very frequent for the slightest wound in the head to prove mortal; and they reckon it a certain sign of death if the wounded Man fall to the ground, and begin to vomit; because this shews that the *meninges* and nerves do also suffer. I have sometimes thought, that perhaps this might happen from too much, and almost superstitious diligence in the cure, while they immediately sequester the wounded Man from all company, let him bloud, prepare the humours, and purge him: And their meaning is good, yet in the mean time they almost starve him, giving him only a little *Panada*. They labour mightily to suppurate the wound, and keep him from the Light, which means alone are sufficient to weaken Nature. But they ascribe all to the subtilty of the Air, which indeed, as it cannot be denied, so whether these other things be so proper, I leave for any man to judge. As many things are done negligently, so now and then some are done with care without necessity.

J. V. Rumerus, obs. 76.

XXXI. I think it not fit to conceal an Error very common among some unskilfull Chirurgeons, who, in winter time, that they may keep off the hurtfull cold of the ambient air, do not onely keep the Chamber exceeding hot, but wrap their Patients heads in many clothes and swatches: Yea, I have seen some that have held heated Tiles over their heads, while they were dressing; Whence we find very slight wounds of the head sometimes prove mortal: It's true, cold must be avoided, but it must be with moderation, as *Hippocrates*, *l. de med. offic.* saith. But unless the clothes that are used be thin and smooth, heat and inflammation in the part will be raised: And in his Book of *Fractures*, when he fears inflammation he avoids a multitude of swatches and clothes.

M. Donatus, obs. mir. l. 5. c. 4.

XXXII. A Soldier received two blows one upon another behind in his head, and was knocked down: There was no bloud, no fissure of the Skull, nor any evident depression: After nine weeks he could speak and walk well, and when he found no pain from the contusion, and was resolved to be gone, he went (to all Mens thinking) to bed well, but he died in his sleep. When his head was opened, there was not the least fissure nor appearance of any depression; but just under the blow, the substance of the brain, for about an inch, was putrefied extremely, and the putrefaction reached to the ventricles of the brain. From this observation let Chirurgeons take notice, that they never judge any blow in the head little, though they find the parts containing the brain unhurt: Let them never promise an undoubted cure in them. And above all, let them allow no errors in Diet; but rather let them treat their Patients with wary Art, and a prudent Diffidence, that they may approve themselves their Craft's Masters.

Sculetus Arman. Chirurg. obs. 8.

XXXIII. A Woman's head was grievously bruised with a Plank, and the skin and flesh were laid open by a Chirurgeon to the bone, and the *Pericranium* was taken off, with some substance of the bone: The wound was left long open, and there were no signs of the bones being broke: And when the bone at length scaled, some portion of the bone that was separated, was taken off violently by the Chirurgeon, presently the bloud was seen to ouze out, then an acute fever, and at length she died. ¶ When either by reason of a contusion, or the injury of the air, the bone is about to scale, it is enough, if without any manual operation, some Cephalick Powder be srewed on it: And as the flesh grows underneath, the dry and dead skale will be thrust out of the wound, and part from the rest of the bone which is alive and hath moisture in it. As it happened to N. whose head was bruised by a fall, after the 40th day a large and notable scale parted from the rest of the bone: This the Chirurgeon got out of the wound with small trouble; now, he dressed the Man every day, by my advice, with those Me-

Cattierus, obs. 8.

dicines the Ancients have compounded For fractures of the Skull: And the Man was perfectly cured.

Vidus Junius, lib. 6. c. 2. de car. memb.

XXXIV. In simple wounds of the head, whereby the Skull is not hurt, how much harm the common custome of the place in opening, or how much good the letting them alone does, in reference to cure; beside many other examples this one doth set out, which was given by J. G. who was struck obliquely, but with no great force, with one tooth of a Prong upon the right side of his head, upon the Bone called *Laterale*: An unskilfull Chirurgeon, by laying open the wound, made it much the worse; he made a Cruciate three inches every way, and laid the Skull sufficiently open, as he thought fit; then he used digesters and oil for several days; whence it came to pass, that not onely so much of the Skull as was laid open, but a great deal more every way was corrupted, and must of necessity be taken out: And now the Man, through God's Mercy and my means, is well.

Arcæus de curand. vuln. lib. 2.

XXXV. The Trepan must be applied the second or at farthest the third day after the hurt (especially when any sharp bone pricks the *dura mater*) while strength is good: for after three days, and as long as there is an inflammation actually, or one imminent, all use of the trepan is dangerous. Nor are they to be heeded, who, according to *Paulus*, tarry in Summer till the seventh day, in Winter till the fourteenth, because then it is too late to trepan, when strength is gone, and it may be suspected, that the membranes of the Brain are already infected with the matter falling upon them.

Sculetus, Tab. 29. Sect. 6.

XXXVI. When the Chirurgeon is to search how far a fissure reacheth, let him (according to J. C. *Arantius* his counsel) rather make use of Printers, than writing Ink, because of the sharpness of the Vitriol.

Id. Tab. 29. par. 4.

XXXVII. In some places the Skull is simple, thin and pellucid, without any Pith; Wherefore some Chirurgeons are mistaken, who think they may in taking away the first Table, cut and bore so long till the bloud come.

T. Barthol. Anat. vesic. bel. 4. c. 3.

Medicines especially made use of by eminent Physicians.

1. Take of the juice of Burnet 4 ounces, Man's Skull calcined 1 ounce, Mucilage made of Man's Skin (especially of the head) 2 ounces, Man's Marrow 1 ounce and an half, White Wax 4 ounces. Mix them, make a Plaster. Apply it, and you will admire the effect. Or (which is much the same) let some Beef washed be put into a Glass, well stopp'd: Boil it in *Balneo vaporoso*, and a reddish yellow liquour will be extracted, put as much Man's Grease to this. Mix it, and keep it; it is a most excellent Balsam for wounds in the head. ¶ Take of juice of Sanicle 4 ounces, Frankincense, Mastick, each half an ounce, Man's Grease 2 ounces, prepared Magnet, Sulphur made of Glass of Antimony, *Saccharum Saturni*, each 1 ounce, Wax, Resin, each 4 ounces. Make a Plaster.

Joh. Agri-cola de vuln. capit.

2. This Liniment invented by me is of singular use, of which at all Assays it never repented me: It is made thus; Take of clear Turpentine, and *Emplastr. de Gum. Elemi.* each 1 ounce and half, Wether Sewer 2 ounces, old Hog's Lard 1 ounce, melt them on the fire. Make a Liniment, with which being melted, the wound must be lightly touched with a Feather.

Arcæus de vuln. cap. l. 1. c. 6.

3. The best and most deterfive Medicine in wounds of the head, is this; Honey of Roses mixt with *Aqua vite* and Turpentine, or the Oil thereof, with some *Sarcocolla*, and *Alkermes* in powder.

Chalmeaus.

4. Ointment of Woodbine is a most excellent Sarcotick Medicine, especially in wounds of the head, when we would breed flesh in the Membranes of the brain: It is made thus; Take of Wood-

M bine

Fallopianus, de
ant. cap. 6.
20.

bine flowers powdered, Betony leaves powdered each 8 ounces, new Wax 10 ounces, Gum *Elemi* 4 ounces, black Wine strong and sweet 12 pound. Mix them together, and boil them to the Consumption of the Wine, strain it into cold water and keep it.

5. *Hofmannus* commends all Medicines made of Mistletoe of Hazle, for wounds in the head; and Chervil also, especially Broth made with it.

Rulandus
I. c. 1. 4.

6. I healed a bloody and deep wound in the head by a fall in four days, by anointing it with oil of Sulphur, and applying *Empl. Diasulphur.* to it. All dangerous and even incurable wounds are cured with these two things most certainly.

V. rignans
secret.

7. Betony bruised and applied doth heal with wonderfull celerity, and its virtue is so great, that it draws out broken bones.

8. Take Turpentine, pure Resin, new Wax, each 2 ounces, oil of Roses 8 ounces, Mastic, Frankincense, each 1 ounce, Gum *Elemi* 2 ounces, Woodbine, Betony, each 3 ounces, the best Wine 10 pounds. Beat the Woodbine and Betony to powder, steep them 24 hours in the Wine, then add all the rest but the Gums, boil them till half the Wine be consumed, and till they begin to look green. Strain it, and let it stiffen, then pour on the Wine, and boil all till the Wine be consumed that was left; strain it again, and add the rest of the Powders, and boil it on a gentle fire, always keeping it stirring; then take it from the fire, and keep stirring till it be cold. Keep it. It is a most excellent remedy to cure all Wounds, especially those of the head.

Vigierus, op.
chir. l. 2. c.
16.

Weikardus,
Thesaur.
I. pharm. c. 1.

9. Take some fine Linen cloth, rub it well, light it at a Candle, and when it is almost burnt with the flame, extinguish it in oil of *St. John's-wort*, and mix them well with a *Spatula*, and let this mixture be applied moderately warm to the wound in stead of a Plaster; it heals wonderfully, and stops blood, especially if a little Alume be put in it.

not at the beginning of the Plague or Pestilential Fever always, but oftentimes four days or more after, when the strength is already spent in contending with the disease.

Sennertus.

II. But we must have a care, when we let blood, that we draw it not to a noble part, nor by a noble part, lest it be affected with its Malignity: Therefore such a vein should be opened, as may rather draw to the part affected, than retract from it: If the Carbuncle be above, you must bleed above; If it be below, then bleed below.

Idem.

III. Because bad humours can scarce be evacuated by blood-letting, some think it necessary to purge, that so they may be evacuated, lest the innate heat be suffocated and extinguished by them, to the end that Nature may afterwards better manage expulsion, and the part it self may not be corrupted by the multitude of humours. But it is greatly to be feared, lest the humour, that Nature endeavours to throw out, should be drawn inwards by the Purge: And this is most to be feared in a Pestilential one; in one not malignant it seems more safe: But when there is a Fever with it, and that acute, the crudity of the matter often hinders Purging; and there is scarce any Carbuncle, wherein there is not something of malignity: And therefore the malignant matter is with more safety thrown to the out-parts by Alexipharmacks, than drawn inwards by Purging.

Idem.
Chalmersus,
Enchir.

IV. Two days after bleeding you may give a Purge: but let it be weak, lest it cause an immoderate motion in the Humours, which I have found ever hurtfull, and sometimes mortal.

V. After letting blood, the part affected must be presently scarified, and with indifferent deep gashes, that the corrupt and poisonous blood may be got out, which otherwise would corrupt all near it: You may also apply a Cupping-glass, or Leeches to the place, when it is scarified. Yet if the Humour flows thither with great violence, drawers cannot safely be used, lest when the matter flows yet more abundantly, the pain grow more violent, whereupon want of sleep, increase of the Fever, &c. Sennertus. do follow.

VI. N. in the time of the Plague was tormented with a Pestilential Carbuncle in his *Anus*, it was large and black, and when it struck in and disappeared, it threatened certain death to the Patient: for retraction, I held first one red hot Iron, and then another to his *Anus* (yet so, as not to irritate the *Anus* by touching it with the Irons, but that it might feel the heat of them as hot as the Patient could well endure) till the Carbuncle was drawn back to its old place: When it was returned, I seared it with an Iron, and laid on a Cataplasim, which in two days removed the Eschar. Take of common Salt half a Scruple, Pepper 1 drachm, fat Figs No. iij, leaves of green Rue 1 handfull, old Sower Leaven 1 ounce, Mix them all very well in a Marble Mortar. Renew it twice a day. (*Adrian Spigelius* his predecessors had this for a secret.) The Eschar of the retracted Carbuncle being removed, I applied to the Sore *Unguentum Citrinum* with lint, which hath a power to digest, attract, breed flesh, and resist Poison. This is *Unguentum Citrinum*. Take of Tobacco juice 6 ounces, new yellow Wax 4 ounces, Pine Resin 3 drachms, Turpentine 2 ounces, Oil of Myrtle what is sufficient; make a soft Unguent. So *Aquapendent* describes it, *Pentat. Chirurg. cap. 20.*

Sculletus,
Armen.
Chirurg. l. 1. c. 28.

VII. If there be any that cannot bear Scarification, or if the Carbuncle will not yield to Medicines, and if corruption, blackness, &c. do seem to increase, we must presently have recourse to cauteries, seeing there is danger in the least delay: And potential ones are not so safe, seeing the Scab made by them falls off more slowly, and so the exhalation of the corrupt and malignant humour is hindred. An actual one is reckoned safer, because the heat and dryness of the fire doth strongly resist putrefaction,

Carbunculus, or, A Carbuncle.

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How it may be known from a Gangrene? XII.

Medicines.

I. **A**lthough the hot blood, from which the Carbuncle ariseth, should be taken away by blood letting; yet it must not inconsiderately be used in all; but if at all, especially in that which is not Pestilential; of which *Galen*, 14. method. m. c. 10. and other Authours must be understood to speak, when they talk of letting of blood to fainting. But in a Pestilential Carbuncle we must not easily do any thing that may waste strength, which we should have the greatest care of in the Plague and Pestilential Fevers: among all which things letting of blood to fainting is the chief; because it evacuates the humour most amicable to nature, and the best treasure of life, with the Spirits: Nay, sometimes when a Pestilential Carbuncle is just breaking out, we cannot safely let blood: because the Carbuncle riseth

putrefaction, preserve the sound parts from putrefaction, and draw from far: Nor need it be thought so grievous a Remedy, when the Patient can scarce feel it, because the Flesh is dead, and we give over Burning, when there is a sense of pain all over it. Yet it hath this Inconvenience in it, that it leaves a Scab, which hinders the malignant and venomous matter from exhaling. If therefore any one will use it, let him have a care that the Scab hinder not the exhalation of the malignant humour; therefore it must be removed within twenty four hours, nor by moistners and suppuraters, in which there is danger of Putrefaction; but with things that deterge, dry, resist Putrefaction, and break off the Fibres, whereby the Scab doth stick. *Fabricius Hildanus* uses this Ointment; Take of bitter Vetch flour, root of round Birthwort, of Florentine Orrice, Swallow wort, each half an ounce, Treacle two drachms; with a sufficient quantity of Honey of Roses; Make an Unguent. *Augenius* commends this; Take of Mily, or Vitriol, 2 drachms, of the best Honey half an ounce, Hogs-lard 2 drachms: Mix them. I had rather use such Medicines to bring a Scab, which usually comes upon a Carbuncle, than use Cauterics; because there is not only simple Putrefaction, but a malignant Humour.

Sennertus.

VIII. The Cure of a pestilential Carbuncle requires that, as soon as may be, Suppuration be promoted, and the fatal propagation of the evil be prevented. To doe this, I have not found any better means than an actual Caution, which also is a way acceptable to most Chirurgeons; but to some this seems too cruel an operation, and out of a perverse pity, being more sensible of its violence than the Patients themselves, they chuse a potential Caution, or a Vesicatory, both which I also use, when I think they are either strong enough, or I cannot use any other means: For sometimes the Physician is forced to give way to the pleasure of the All-knowing By-standers, though it be to the Patient's hurt. ¶ Carbuncles may be cured by stopping the spreading mortification of the adjoining parts; by separating the mortified part; and by cleansing and healing the Sore that is left. I have not hitherto known any thing that more powerfully, certainly and sooner stops the spreading mortification of Carbuncles, than Butter of Antimony, if it be anointed round the part affected; for then the corruption of the part, which so spreads and eats all before it, stops. Next to this I reckon *Magnes Arsenicalis*, made of equal parts of Arsenick, Antimony and Sulphur, and mixt in convenient Plasters: by help whereof the corrupted part is disposed to its separation: which same thing also the Butter of Antimony performs, for it does not only put a stop to the progress of the pestilent Venome, but moreover separates the corrupt parts from the sound. All Balsams of Sulphur, and especially *anisatus*, mixt with *Unguentum intrapharmacum* and *basilicon*, and applied to the Sore, do effectually cleanse the parts, when freed from the pestilent Carbuncle: And the same Balsam mixt with some common known Plasters doth heal up the Sore when it is cleansed.

Sylvius de le Boë, Append. ad pr. Tr. 2. in fine.

IX. Sleep is severely prohibited in a Carbuncle, because in it men think the Poison is drawn inwards, whereas notwithstanding one would conjecture, that in Sleeping the heat inclined outwards, from the Heat and Sweats that people are in while they sleep: Therefore it is not at all necessary to keep Patients several days from sleep, as I have sometimes seen, and so afflict and weaken them.

Platerus, Pract. l. 2. p. 714.

X. A Boy four years old, had been afflicted three days with a Carbuncle in the middle of his Forehead with a red Swelling, black in the middle; all his Face was puffed up. To stop it, I order presently a Caustick to be applied to the black part, and *Unguentum basilicon* with Treacle, Oil of Scorpions of *Matthioli* and the Yelk of an Egg to the Eschar; and a Cataplasim of Plantain to the whole Tumour: besides repeated Blood-letting and Cordials, I appli-

ed a Vesicatory to his Neck; the next day I find the Fever much abated, the Inflammation of the Tumour remitted, and all things asswaged. The benefit of the Vesicatory was here observable; for by deriving a great part of the virulent humour, it must be believed it performed the greatest share of the Cure: Therefore, I think, it should be used in every one, and applied near the part. I used no defensive of Bole, because of the hurt of Repellents in Diseases of the Face.

Riverius, Cent. 4. Obs. 9.

XI. In the City *Rapescurvensis* there is a Disease called *Malvat*, which is a sort of Carbuncle, of which all men, unless they pass nine days without sleep, do dye; In the mean time they make section round the Carbuncle, and apply Cupping-glasses, and at last they are cured with *Unguentum basilicon*. Without doubt this Disease is contracted from some latent Contagion in Sheeps-wool: for all the Inhabitants employ themselves in Woollen Manufacture; and therefore it only comes in the Face or Hands of the poorer sort. And Watching procured by any means does good, because in Sleep, a concomitant of this Evil, the Poison centres to the Heart.

P. t. Borel-lus, Cent. 2. Obs. 12.

Sam. Clossius ad Greg. Horstium, l. 7. ob. 12.

XII. It is distinguished from a Gangrene, not by sense of the part, for that is lost in both, but by scarifying the place: for if when the Flesh is cut deep, it be black, and neither froth nor corruption come out, but remains dry, with inward hardness, it is a Carbuncle. ¶ The greatest part whereof, which gave the denomination to the Disease, is as it were turned into a Coal; wherefore it is void of sense, and treated like a Gangrene, circumscribing and limiting it either with Medicines or Instruments. Yet a Gangrene requires another Cure, because it often happens, that the Gangrene is corrected, and the part is restored to its natural state, those things being evacuated which should be, and those applied which vindicate the part from putrefaction.

Medicines especially made use of by eminent Physicians.

1. The Leaves of upright Vervain beat in a Mortar with Fat, and applied, do wonderfully take away the crusts of Carbuncles, and stop fluxions to the place.

Ætius, l. 4. c. 58.

2. Take green Scabious, and beat it in a Mortar, then add the Yelk of an Egg, some old Hogs-lard and a little Salt, mix them well: it's an efficacious Cataplasim. I have seen a pestilential Carbuncle perfectly suppurated and overcome with this Cataplasim in 5 hours time.

Horat. Aug. genius, de Feb. l. 8. c. 10.

3. The Countrey people of *Naples* have a secret Remedy of the Leaves of Prickly Bind-weed: If they that have the Plague apply that side of the Leaf, which is smooth and glib, to the Swelling, it presently draws the peccant matter out: but if they turn the rough and white side, it repels the humour inwards.

Barthol. Hist. Anatom. 27. cent. 6.

4. A Cataplasim of a sowre-sweet Pomegranate, or of one sowre and another sweet, boiled well in Vinegar, is very good to take off the acrimony of the humour in all malignant and inflamed Pustules. It is found so by experience.

Chalmatus.

5. This is a wonderfull thing, and reckoned for a Secret; Beat Comfrey and Daisies between two Stones, and apply them for a Plaster.

Sebast. Cor-tilio.

6. Spirit of common Salt is a high Alexiterial Medicine, if some calcined Gold be dissolved in it. ¶ Salt of Toads burnt to ashes, extracted with water of *Carduus benedictus* outwardly applied wonderfully cures pestilential Carbuncles, and safely heals all Cankers. Half a drachm with Cinnamon-water is sufficient.

J. p. Fab.

Idem.

7. Take of the Root of White-lily, Marsh-mallow, each 2 ounces; Linseed, Flowers of Chamæ-mil, Mullein, St. John's-wort, each 1 handfull; Figs No 20: boil them in Milk, and so apply them. It is good

Rudolph. good also in pestilential Buboes, as I have experien-
Goclenius. ced.

J. Bapt. Van 8. If a deep blew Sapphire touch a pestilential Car-
Helmout. buncle, and be rubbed on it for some time, and
then taken away, it draws out all the Poison, if
its virtue be not weakened before: therefore some
use to circumscribe the swollen place by drawing
the Sapphire round it, lest the Poison should expan-
date farther, and invade some noble part adjoining.

Horstius. 9. Wheat chewed in a sound person's mouth, and
elst. 28. 1. 2. laid to the place, asswages Carbuncles, and then at
some distance draw it round the fore.

Parvus. 10. Rhadish root cut into pieces, and often laid
to the Carbuncle, draws out the Venom powerfully.
I have often used the following Remedy success-
fully, to assuage the heat and pain of Carbuncles, and
promote their Suppuration; Take of Soot scraped
from the Chimney 3 ounces, Salt 2 ounces, reduce
them to fine Powder, add 2 Yelks of Eggs, stir them
together, till they be in the consistence of a Pulvis.
Lay it warm to the Carbuncle.

Idem. 11. The Pulp of Quinces bruised, and applied to
Prævotius. a pestilential Carbuncle, cures it successfully.

Francisc. Va- 12. A Woman, that had a very bad Carbuncle ab-
leriola. out her mouth and lips, was thus cured: When I
had first scarified the place, I applied this Medicine;
Take of the Juice of Comfrey, Scabious, Marigold
(these have a wonderfull and powerfull property a-
gainst pestilential Carbuncles and Buboes) each 1
ounce, old Treacle 4 scruples, Salt 1 drachm, Yelks
of Eggs N^o 2. This Secret of mine never failed
me.

J. Vigerius. 13. You can apply nothing better to Carbuncles
than this Remedy; for it extinguishes the maligni-
ty to a miracle; Take of quick Lime 1 ounce, soft
Soap, what is sufficient; mix them. Make an Oint-
ment and apply it to the fore.

Weikardus. 14. The Carbuncle is forced into a narrow com-
pass, where it can doe less harm, if bruised Scabious
be laid round it on the sound place, and Tanfie be
laid on the Carbuncle, and it will be done more ea-
sily, if afterwards some Hellebore root be thrust be-
tween the Skin and the Sore, cutting a hole in the
Skin first.

with Water. We give some Meat-broth to six oun-
ces, with Oil of Almonds and Syrupus acetosus, each
3 ounces. When a Man has vomited, if the fit con-
tinues, it is a sign of thick Bile sticking to the Sto-
mach; therefore give 4 or 5 ounces of the Syrup;
and an hour after, except he vomit again of his
own accord, give him 6 ounces of new Oil of Al-
monds: for the matter being thus incited, deter-
sed and attenuated by the Syrup, may more easily
be carried off either by Vomit or Purge. Nor let
the Syrupus acetosus make you afraid at all, because (as
Avicenna teacheth) it converts Bile into Phlegm, and
Phlegm into Bile. And presently after Vomiting,
when the gnawing is laid, some astringent, streng-
thing thing must, according to Galen's advice, be ap-
plied outwardly. And thus you must proceed in
preventing remedies; you must again diminish the
matter, temper the heat of the Bile and Fever,
withdraw it from the Stomach, intercept its pro-
gress, and strengthen the mouth of the Stomach: In
the Cure thus; you must sometimes allay the Pain
with Anodynes or even with Narcotics; sometimes
you must discharge the cholerick matter by gentle
purging and vomiting, till the Heart-burn and Fe-
ver be diminished and quite taken away.

Idem, ibid.

III. In a Heart-burn with a Fever sometimes a
Vomit must be given, sometimes not: And at other
times it is more expedient either to purge or take
off the acrimony of the humour. If the Disease be
very small or moderate, though the strength be
good, you may omit cleansing the Stomach, and
proceed to strengtheners and qualifiers: If the Disease
be violent, you must qualify the acrimony and also
cleanse the Stomach: And when the Heart-burn is
laid, you must evacuate the whole Body either by
blood-letting or purging, as the nature of the Dis-
ease shall seem to require. Galen, 1. ad Glaucon, puts
this case. Come on (saith he) if one be in a Fever, and
there be a plethorick disposition, but proceeding from fresh cru-
dities, and he be heart-burned: or also, if he should vomit any
bad humour, and in his discharge shall be much offended, so
as to be very sick and restless, shall we here with respect to
the Fever try onely to evacuate the Plethora, which otherwise
without trouble we might doe? Or shall we rather provide for
the mouth of the Stomach; and afterwards, when this is grown
something better; evacuate the whole Body, as much as the case
requires? I think we should doe this last: for I have seen
many who have been thus held, some of them dye, others brought
to death's door, when the Physicians have attempted to cure
them, before they had strengthened the mouth of the Stomach.
Hence it appears, that when the Heart-burn is vi-
olent, we must not vacuate the whole Body; but
strengthen the Stomach, take off the acrimony of
the humours, and afterwards proceed to purge.
This indication of taking off the acrimony of the
Bile bore such sway with Hippocrates, that he, 4. acut.
in an acute Fever with Heart-burn, fearing the fu-
ture Symptome, gave boiled Asses milk. These
things must be done in the Fit: but in the time of
Interval, when this Symptome is laid, we must go
to the ordinary Cure; but when the Disease is very
violent, we must doe all at once, i. e. purge and
strengthen the Stomach, and take off the acrimony
of the humours. Now the Question is, What way
we should purge. As to vomiting, Galen in the fore-
cited place speaks thus; But such (saith he) as are
wasted with bad humours, gnawing the mouth of their stomach,
you must cause them to vomit with warm water, or water and
oil: If they be hard to vomit, you must first warm the places
near the mouth of the stomach, and the hands and feet; but if
they cannot vomit this way, they must provoke it by putting their
finger or a feather in their throat: But if this way neither will
doe, they must again take the best Oil can be got, a little
warm: for Oil usually does not onely provoke to vomit, but
also makes the Belly loose. And this is very good in the pre-
sent case: wherefore unless it happen of it self, it must be
procured by Art, and this thing above all we must attempt with
proper remedies. Where he proposes Medicines to
purge sharp and biting humours; such as both take
off

Cardialgia, or, The Heart-burn.

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Sometimes blood must be let. I.

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Diet. VI.

Medicines.

I. **I**T is no season to let blood, when sincere bile
offends, and it is onely admitted in three
Cases. 1. When there is a hot Intemperature of
the Liver, that produces very hot blood, which is
the reason, neither any fleshy nor fat substance can
be produced. So in Hippocrates, 5. Epid. A man in Ce-
nias was taken with most violent pains of his Stomach,
after he was let blood in both Arms, and a good
quantity taken away he was cured. 2. When a blou-
dy Ichor flows from the Liver or the whole Body
to the Stomach, because of the Suppression of the
hæmorrhoids. 3. When it proceeds from the Sup-
pression of the menstrua.

Fortis, con-
sult. 68. cen-
sur. 2.

II. Its legitimate and proper Cure is taking away
the Cause, which must be done in this order; When
the fit is coming, Vomit must be provoked immedi-
ately, after Galen's example, 6. in 6. Epidem. comment. 5.
who raised Vomiting either with simple Oil, or mixt

off the acrimony, and purge not onely by vomit but by stool: Water and Oil moisten, loosen and obtund; Oil answers this intention best, for sometimes it causes vomit, sometimes it gives a stool; yea, and sometimes it doth both; but because it doth not strengthen, but make lax, he therefore gives Wormwood boiled in Honey and Water: And at length, when Superfluities are every way purged out of the Stomach and Guts, he then applies himself to strengthening with astringents inward and outward. This way of cure differs from the former, where he supposed the Heart-burn less than to cause fainting, namely, such a Heart-burn as comes by fits and may be cured in the intervals: But here he supposes a dangerous Symptome, namely, Fainting. Therefore in the former Cure Galen would have us first strengthen the mouth of the stomach, and proceed afterwards to vacuate the whole by letting blood or purging, but here he makes no mention of evacuation: Again, in the former he would have us onely take care of the mouth of the stomach; but here he explains the way to mitigate, to purge by vomit and stool, and to strengthen. What therefore is the reason of this diversity? No other certainly, but because the Heart-burn, and all Gnawing of the stomach, is rather to be corrected with obtunding and alterative Medicines, than enraged with evacuating ones: But when necessity is urgent, we must make use of these, but then they must be moderate in their kind, such as both obtund and purge from the place, as in the case proposed by Galen, i. e. when Fainting is either expected, or actually present.

Hor. Augu-
genius, Tom.
i. Epist. l. i.
p. 128.

IV. Celsus, l. 3. c. 19. saith, the first Indication in the Heart-burn is, to apply Cataplasms to the Stomach, which may repress it: Secondly, to stop Sweating. For this he is grievously found fault with by some, because, when this Disease sometimes takes its original from the sole acrimony of humours in the Stomach; sometimes, beside that, from a base, poisonous quality; yet, before the peccant humour be either vomited or purged; or, if it cannot be evacuated, before its acrimony be taken off, or its base quality subdued, he applies astringent Medicines to the mouth of the stomach, whereby the matter is more stult, and rendered more stubborn in evacuation and alteration. Yea, Galen, l. ad Glauc. 14. while the bad humour is yet contained in the part grieved, he bids us in the beginning onely warm the parts near the mouth of the stomach, and the hands and feet to make the part affected lax, that so it may more easily discharge and divert the matter. All which things indeed, as they are true when the Disease gives truce, and time allows the use of such Remedies; so when the case is hazardous, and strength sinks (which is Celsus his case, wherein the Body is melted with immoderate Sweat, and the Pulse is low and weak) we must immediately have recourse to strengtheners, as Galen there advises, (See the place at large above.) Besides, astringents first strengthen the mouth of the stomach; but then they are the cause, that when it is strengthened, it forces the noxious humours downwards that used to rise upon it, which falling downwards, and stimulating the lower passage of the stomach, are at length discharged by stool.

Rubeus, com.
in loc. citat.

V. While the Heart-burn continues, and the matter is much diminished, we may safely proceed to things that intercept the course of the humours to the stomach, to be given two hours before the Fit (if a Fever be joined with it) And they are in crassating and astringent things; as, Take of prepared Pearl 1 drachm, true terra sigillata half a scruple, Scorzonera-water 4 ounces, Pomegranate-wine 2 ounces. Give a spoonfull often. You may add 5 drops of Tincture of Corall. If it be malignant, give new Treacle with Pearl.

Fortis.

VI. Hippocrates cured a Woman of the Heart-burn without intermission, by giving her Barly-grewel,

with some juice of Pomegranate in it, and eating once a day. Now if the Pain came from Cold; how could Pomegranate-juice be proper? If from Heat; why must she eat no more than once a day? For they that are so held; are hurt by nothing more than Fasting; insomuch that unless they eat something in the morning before their usual dinner-time, they either faint, or at least feel a greivous gnawing; and they are never better, than when their Stomachs are full of victuals, whereby the Bile is imbibed, and the close contracted Stomach is not receptive of it. Certainly her Disease was from a fluxion of hot humours, and they that are so held, must take food neither in a small quantity, nor thin, because such corrupts and increases the Cacoehymy; but if a good quantity and substantial be taken, it frees from fluxion and concocts. Nevertheless a great quantity taken often can never be concocted, especially in an indispensed Stomach; therefore they must eat plentifully, and but once. But because they cannot pass any long time without all manner of food, they should use some light and medicinal Breakfasts and Suppers, such as Barly-grewel with Pomegranate-juice. Therefore Hippocrates does not here mean by *μαστίχη*, all tasting of Food, but, one full dinner; so his advice is to dine once well, and at other hours to take a taste of something medicinal, which cannot load the Stomach; as if you should advise one to take a Tost and small Wine for Breakfast in Winter, and Pomegranate-juice in Summer; and for Supper, Barly-grewel, with that juice or a baked Pear.

Vallesius;
sect. 2. Epid.
lib. 2.

Medicines especially made use of by eminent Physicians.

1. The Stomach of an Osprey dried to Powder and drunk doth wonderfully help them that cannot digest their meat; but it must not be continued, for it causes leanness. ¶ In a continual Pain and Vomiting, when nothing will stay in the Stomach, this is an approved Remedy; Two Yelks of new-laid Eggs, a spoonfull of Honey, Powder of Mastick half a drachm, let them be made hot in live Embers in an Egg-shell; take this thrice a-day at several intervals.

Al. Benedi-
ctus.

2. A large Cupping-glass with much flame set on for an hour, cures forthwith, like an enchantment.

Casalpini.

3. I have known this Electuary doe much good; Take of Conserve of Roses 6 drachms, Spec. Aromat. rosat. 2 scruples, White-frankincense 1 scruple. Mix them, make an Electuary. Take the quantity of a Chestnut when you go to bed. ¶ Take of Sea-wormwood tops, Chamæmil, each 1 Pugil; White-frankincense one drachm: Boil them in a sufficient quantity of Water. Strain it. To 4 ounces of the Colature add of Syrup of the juice of Chamæmil, Feaver-few, each half an ounce; for 2 doses. With this I have eased most violent Pains in the Stomach and Intestines. ¶ This is a most present Remedy for the Heart-burn; Take of new Conserve of Roses 2 ounces, Spec. Aromat. rosat. 2 scruples, White-pepper 1 scruple: Mix them.

Grato, l. 11
conf. 6.

Id. lib. 21
conf. 10.

Idem, l. 2.
p. 314.

4. This Liguour appeases the Pain in the Stomach wonderfully, if half a drachm of it be given; Take of Mastick 4 ounces, the best rectified Spirit of Wine half a pound, Galangale 1 ounce; Infuse them, digest them, and distill them by an Alembick.

Deodatus;
pamb. hyg.

5. Oil of Sweet-almonds taken in some Broth, that hath had Citron-seeds boild in it, is of great efficacy; and so is Emulsion of Citron-seeds.

conf. 35.

6. The Sapphirine Oil of Chamæmil, given to 4 or 5 drops in Mint-water, is excellent for the Heart-burn.

Hartmannus.

7. In Heart-burning from acid Phlegm and crude Juices sticking to the Stomach, Oil of Aniseeds rubbed on the region of the Stomach is of great efficacy.

8. This

8. This is highly commended in Pain of the Stomach; Take of Nutmeg 2 drachms, Spirit of Wine 2 ounces, Honey of Roses till it be sweet; boil them a little; take 2 or 3 spoonfulls.

9. I can reckon up several who have been cured of most bitter Pains in their Stomach, onely by applying a Plaster of Gum Tacamahaca.

10. Take of Spec. Hiera 2 drachms, Diarrhodon Abatis half a drachm, and with Marmalade of Quinces not aromatized I have made Bolus's, and given them to several, who commonly the same day were all of them freed from their Symptoms.

11. In this Disease I use this: I take 3 Eggs and break them, and with Oil of Roses and Mastick I make Fritters of them, and apply them to the mouth of the stomach: It is an excellent Remedy.

12. I have often found 1 drachm of Powder of Calamus Aromaticus, given in 2 ounces of clarified Juice of Worm-wood hot, very effectual in the Heart-burn.

13. About 3 ounces of the Juice of Dill boiled in Water, and drunk, doth wonderfully relieve the Pain of the stomach, that is with reaching and hick-cough.

A Vomit is sometimes proper. XII.

When it may be given in a suffocative one? XIII.

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By the abuse of sweet things it runs the more into the mouth. XX.

Whether Bath waters and Spas be good? XXI.

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Decoctions of Guaiacum not always wholesome. XXIII.

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Washing of the Head, sometimes good. XXVII.

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Rubbing the Head bad. XXX.

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Whether a drying Diet be always proper? XXXII.

What posture one should lye and keep ones Head in? XXXIII.

Exercise of the lower parts wholesome. XXXIV.

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The Cure of a Catarrh falling upon the Breast. XXXVI.

Of a violent one falling upon the external parts. XXXVII.

Medicines.

Catalepsis, or, A waking Senselesness or Stupidity, wherein a man retains the form and figure of one awake, when nevertheless all the functions of his mind and senses are asleep.

The Contents.

Cured by voiding Worms. I.

Whether Wine may be allowed? II.

I. A Girl not full eight years old in a Burning-fever was first taken with a deep sleep, and then with a Catalepsis, her Eyes being quite open: She took nothing down for seven days, but a little Chicken-broth with Purilane boiled in it; she lay pale, speechless, and without motion, onely she breathed with difficulty. The Mother, in utter despair of her Daughter, gave her a Suppository of Honey, with which she voided a knot of forty two Worms without any excrement, and presently came to her self. Some caliginous Vapours from these Animals in her Belly seized all the Senses of her Brain.

II. Galen, 3. simpl. allows Malmsey-wine to Cataleptick persons, after whose example Amatus permits Cretian. Wine is best with some Sage or Rosemary in it.

Catarrhus, or, A Catarrh or Defluxion.

The Contents.

The Head is often in no fault, and therefore not to be tormented with Remedies. I.

Many Diseases ascribed to it amiss. II.

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If a salt one falls upon the Breast, we must purge. X.

If we fear a Consumption, we must give a strong Purge. XI.

I. It is clear from Galen's Testimony, 2. de differ. Febr. cap. ult. that sometimes a Catarrh is caused by some fault in the blood, when the head is no way out of order. Therefore one cannot say absolutely that a Catarrh is the cause of a Fever. It is confirmed, because the subject bowels, or often the whole body may afford fewel to the Catarrh, the head continuing altogether unhurt: for the Catarrh sometimes arises from fulness of body, sometimes from the heat of the subject bowels, and sometimes from the weakness of the head, as is gathered from Galen ad Glauconem, cap. 15. While therefore the subject bowels abound with excrements, they conspire in production of the Catarrh, either because in a long tract of time they are indisposed, or because some error is committed in the first concoction, as when the belly is stufft with excrements, in which case the head may be sound: They err therefore, that apply Remedies, as Embrocations, Washings, &c. to the head, which is onely hurt by sympathy, when the subject bowels should be cured. ¶ Oftentimes excrementitious humours that are sent up from the lower parts to the brain, cause a Catarrh, and acquire a preternatural motion, the ordinary passages being obstructed, by which they use to be purged: And then the Catarrh is opportunely cured by opening the passages, together with gentle and continual Purging by Broths or some Decoctions, celebrated for several days. ¶ From Cauteries actual or potential upon the coronal Suture a Physician can expect nothing but great harm: for though they be commended by Aetius, Avicenna, Aegineta; yet I cannot approve of them. This Commendation is founded upon the old Hypothesis, That the Brain is the fountain of Catarrhs, which however is now expired. ¶ A Catarrh is not bred in the Brain, because either private or publick excrements are gathered there: Private excrements the Brain hath but few: The publick invented by Argenterius, that are confluent thither from the whole Body, are none, neither moist nor vaporous: It is a Fiment, that the Brain is like a Cupping-glass, or an Alembick, or like the Roof of a House that receives the Vapours from below; or like the Middle region of the Air, in which the Vapours ascending from the Earth are condensed, and fall like Rain or Snow upon the Microcosm. The whole Body gives occasion to these Catarrhs: This doth by the Arteries put away the impure Atomes of the Blood, before it comes to the Head, either upon the Membranes of the Nose or Jaws: These

These Membranes do imbibe and sweat out these Atomes after this manner: The Arteries, and partly the Veins also, are divaricated like Spiders-webs into the spongy flesh of the Nose and Jaws, and sweat through like dew, after the same manner that Aliment does, or Liqueur in a new earthen vessel. The Catarrh penetrating after this manner, while it is not altered by the Membrane, runs down thin, &c.

Id. m. ibid.

Crato.

II. Crudities are the cause of all Catarrhs. ¶ And there are Impurities, not onely through the fault of the first and second Concoction, but of the third also, which is onely made for the due nutrition of every part, of which depravation also the *Archeus* provoked by external causes, and therefore neglecting the office of appropriate digestion, is the cause. For it is a certain Axiome, where there is aliment, there is excrement; and, Where there is nutrition, there is also segregation of excrements; or, if the expulsive faculty languish, collection of them. Therefore there is no necessity, that we should so industriously fly to Catarrhs and Distillations of humours, when every part, if it labour of any Infirmitie, may manifestly gather its own proper preternatural excrements, the same way as *Helmont* hath explained it.

Frid. Hofmannus, m. m. l. 1. c. 11.

III. There is need of much caution and distinction in the Cures of Catarrhs: For an old Man, destitute of native heat, and labouring of perpetual Crudity, must be cured one way: A hot young Man, who abounds with a bilious and easily fermenting Serum, another way: They whose distempered Bowels and very moist Head create this Flood, one way: They that create themselves this trouble by Surfeiting and Crudities, another: A Catarrh in the beginning, while the humours grow hot, ferment, and are in motion must be treated one way: When the Ebullition is ceased, another: And we must proceed differently with respect to the quality, quantity and motion of the matter.

Franc. Ignatius Sharrmair, lib. 2. conf. 1.

IV. The concoction and maturation of Defluxions, is the moderation or adequation of their substance and qualities, which especially cures and ripens Fluxions. Therefore *Hippocrates de vet. Medic.* "Fluxions (saith he) which, I think, are all caused by the acrimony and intemperature of humours, are recovered and cured, when they are temperate and concocted, that is, made thicker: as in an *Ophthalmia*, the heat and inflammations of the Eyes cease, when the Fluxions are concocted and made thicker, and the weeping matter of the Eyes stop: And concoction is made by thorough mixture and mutual tempering. And he subjoins. Moreover Fluxions falling upon the Throat, from which Hoarseness, Quinsies, *Erysipelas*, *Pneumonies*, all these first of all come down moist and sharp, wherein the Diseases are confirmed: But when, being made thicker, they are grown more ripe, and free from all acrimony, then both the Fevers, and whatever things offended by reason of the Defluxion of the Catarrh, are at an end. ¶ Nor yet are they to be irritated by Medicines, as *Plutarch* saith in his Book to *Apolonius*; "Neither (saith he) do the best Physicians presently draw out their Auxiliaries of Medicines against copious Defluxion of humours; but they let the gravity of the Phlegm by outward anointings ripen of it self, because time uses to ripen all things. And that this does not onely hold good in Diseases of the Body, but in Passions also of the Mind; *Oceanus* also hath left us it in *Aeschylus*, who persuades *Prometheus* that *Jove* was not to be prayed to nor addressed in the first heat of his Fury, but after he had concocted his anger.

J. Langius, Epist. 160. lib. 2.

V. Sometime the Brain is temperate, yet fruitfull in Catarrhs; because of the narrowness of the passages either natural or acsititious, by which it purges the excrements into the nostrils: therefore when its excrements do not run by their due cha-

nels, being increased in the Brain, they cause distillations by other ways; which appears in those that snore and keep the nostrils open in their sleep.

Zecchius.

VI. Sometimes the humours offend neither in quantity nor quality; but are suddenly squeezed out onely upon occasion of the Cold that shrinks the part in good strength, whereas they would otherwise have been expelled in a longer tract of time. He that would treat the mittent part in this manner disposed with Medicines, might cast his Patient into a Fit of sickness. I have sometime seen persons well in health, that have been tormented some days with a Distillation of the Brain, by reason of the cold Air, who within a short time after, the matter being consumed, which could not be contained, because the parts were contracted by the external Cold, remained well in health, because the mittent part was every way sound. Empiricks, while they prescribe Washings, Embrocations, Cupping, and things of the like nature, to these men for the cure of the part mittent, do fall into a manifest error.

Sanctorius, meth. vit. err. l. 10. c. 2.

VII. Sometimes in a cold Distillation we must begin with Blood-letting, when a plenitude is annexed, common or determinate, and that mixt. And this must be done, when the matter that falls upon the Lungs and Breast gives some fear of a *Pneumony*, *bañard Pleurisie* or *Quinsiey*. ¶ Blood-letting is not convenient, because it renders the humours more fluid: therefore unless the Lungs, or Sides, or Breasts be disaffected, we must onely use Purgation. ¶ One of these five conditions do best shew it. 1. The Nature and Quality of the fluent matter; if the Fluxion be hot, sharp, and come violently, bleed; which you may know, if blood and half concocted spittle be raised by coughing, then it is evident that Exesion is made by tarrying for Concoction. 2. If the Fluxion fall upon a part, from the hurt whereof Life is endangered, we must not then stick to let blood. 3. If the Body be full. 4. If there be a continual or intermittent Fever, so it rise to putrefaction; otherwise the cure of a Catarrh may be expected from an *ephemera*. 5. We must bleed when the Defluxion falls so violently and suddenly that it cannot be spit up; for Nature is diverted, that it cannot so well send to the part affected. ¶ In a Catarrh *Rhaphes* would have a Vein opened, if after applying a Cloth to the Head, the Disease be neither taken away nor diminished: He hath respect to a hot Catarrh, wherein the matter is forced from the Head cooled by some external cooling cause; for he knew that sometimes in the beginning the Cold does overcome the Blood, and that if it be remis, it will go away with warm Cloths, for by using them but a little time, the Head is not so heated as to draw the Blood, but its Cold is onely taken off, and the Cold being conquered, the Disease is so likewise, that is, the expression of the catarrhus matter ceaseth. Sometime the Cold of the Head is overcome by the Blood, if the Cold be so fixt, that it will not give way to hot Cloths, wherefore the Disease is neither taken away nor diminished: And therefore it is necessary to use those Medicines that heat more than hot Cloths; and then if Blood should abound it would be drawn to the Head: Since therefore the Blood is of more moment, than the Cold in the Head, a Vein must be first bled. ¶ Because it often so falls out, that a Physician happens upon suffocating Catarrhs; when there is fullness, and the matter begins to fix upon some noble part, he must immediately let blood.

Saxonia, pract. pres.

Joubertus.

Mercatus, cap. proprius.

Capivacius.

Claudius, de Catarrhis.

VIII. We must much scruple to proceed to stopping things; for unless grievous Symptoms do urge, we must not use stopping things before purging or revulsion of the humours; yet if the humour do so pour upon the Lungs, as by its sharp violence to cause a grievous Cough, or to endanger Suffocation or Exulceration, we may presently, before we purge,

Hennius.

purge, stop its unbridled motion. We must contrive to give these stopping things at night and after Supper; for what matter is already got into the passages, should be expedited: but at night all things have a motion thither, for the juices in sleep creep inward. ¶ It is queried whether a Catarrh may be stoppt, for it is not lawfull to drive back a noxious humour into a principal part, as the Head is, and to stop up the passages whereby it should be evacuated? But we are not willing to stop up the passages, but onely to thicken the humour, that it may more easily be discharged, lest it should cause a greater mischief.

Enclir. med.
Prad.

IX. Purging may be used in Patients, when there is imminent danger of Suffocation or Consumption, without any preparation premised, whatever they think to the contrary who fear lest a Purge should disturb the humours and carry them to the place affected: which reason has no weight with me, for upon the same account we might never give a Purge in any Disease of an inward part, lest the grieved place should receive the moved matter. ¶ Concerning the use of Purgatives observe; First, they are convenient when matter should be purged from the whole; because from 4. *acut.* 85. we must not use Hellebore in every Catarrh, seeing sometimes we must onely look after the Head, when namely the matter offends not in the whole. Secondly, when Purgatives are given, coction of the matter to be carried off must ever be supposed, at least in the whole; for seeing that in a precipitate Distillation it must be supposed, the peccant matter for the greater part is driven from the whole to the head, as to a weaker part, it seems rational to conclude, that what remains in the whole is concocted and conquered: for if there be any bad excrements in the body, and they separated from the good juices, for the most part they are transmitted to the weaker parts, and therefore may be purged as if concocted: for this reason *Galen*, *loc.* 2. gave a young man *Coloquintida* that was sick of an *Alopecia*, as soon as he visited him. But whether may we purge the matter of a cold Catarrh at the beginning without preparation? Some would have it so for this reason, because if it were copious and fell extreme violently upon the Throat or Breast, there would be imminent danger of Suffocation and *Asthma*, which could be no way stoppt but by Purging: But if a Purge should be given because this matter by reason of its toughness and thickness resists the Physick, it may easily be disturbed, and being thrown upon the same parts, may create those very same evils, or worse. Therefore I think sharp Clysters should be used in their stead. ¶ If fulness compels us to evacuate the body, we must use such things as leave some attraction behind them.

Cludius,
Tr. de Catarrho.

Kondlerius.

X. If a salt Catarrh fall upon the Breast, we need not hesitate about the use of Purgatives: for *Galen* himself, 5. *meth.* 14. gave a Purge of Pills made of Aloes, Scammony, *Coloquintida*, Agarick, *Bdellium* and Gum-arabick, the use of which would yet be safer, if some Whey of Goats-milk prepared were given when they begin to work; or Barley-water to two or three pounds. *Ele& de succ. Rosar. Diasepsi. solut. Troch. de Violis cum Scammon.* &c. do purge the thin matter, without waiting for concoction.

Fortis,
cof. 18.
cent. 2.

XI. When the Bowels and Bloud are brought to good temper, some Head-pills made of *Coch. simpl. Aureis* & *Mastick* may be given twice at least; seeing *Galen*, 5. *meth.* 14. made use of very strong Pills of Aloes, Scammony, *Coloquintida* and Agarick, even in an Ulcer of the Lungs. Yet they should always drink Whey or Barley-water after these Pills, to hinder drought and heat in the Bowels.

Idem, cof.
18. cent. 2.

Riverius.

XII. If a Catarrh be very stubborn, we must have recourse to Vomits, which powerfully root out the matter of it. ¶ We must give Hellebore to them that have a Defluxion falling from their Head. *Hippocrat.* 4. *acut.* 302. By give Hellebore, that way of Purging onely must be

understood, which is made by Vomiting: for it is certain, that when there is mention made of Hellebore simply, the white must always be understood, which the Ancients used frequently to purge upwards with all. And *L. de loc. in b. f.* 2. v. 133. When a Defluxion from the Head is coming, he affirms that a Vomit is convenient; and the reason is, Because the upper parts, where the root of the Disease is strong, are emptied; and a revulsion of the humours is made, which falling downwards might create Diseases in the lower parts.

Pr. Marfianus,
comm.
in eum lib.
c. 11.

XIII. In a suffocative Catarrh Vomits may serve for most Medicines, because when they are seasonably given, both the antecedent and the continent cause is removed from the Pipes of the Lungs. Yet it must be observed that if the fault lye in the whole mass of blood, and bad humours mixt with the blood be carried with the Arteries forcibly to the Lungs, and be so raised by some exotick ferment, that there is great danger of Suffocation; as it often happens in the Scurvy and Hypochondriack Diseases, then Vomits doe no good, but Blood-letting.

Frid. Moemannus,
m. l. c. 2.

XIV. They that are often troubled with Defluxions, sometimes fall into a suffocating Catarrh, which is no less dangerous than an Apoplexy. Now, according to the advice of Physicians, blood must presently be let, Frictions upon the Shoulders, Neck and Arms, and strong Ligatures must be made: A Vescatory of Leaven, *Cantharides* and Vinegar must be laid on the coronal Commissure: *Loch de scylla cum Oxy-melite* & *Ammoniaco* must be given if the matter be thick; or, if it be thin, we must proceed to *Pilul. de Cynogloss.* (yet we must not exceed one Scruple in a dose.) I mention these things, because in sudden Diseases the minds of Physicians are often in such consternation, that they cannot think of Remedies. ¶ A Physician often happens upon suffocating Catarrhs, concerning which my advice is, that when there is fulness, and the matter begins to fix in any noble part, Blood be immediately let: besides, to dilate the Breast and get Breath, let a Cupping-glass be set upon the *Vertebrae* of the *Thorax*; and for the same purpose and to divert, let Cupping-glasses be also set to the fleshy parts of the *Scapulae*. For so many escape, whereas several miscarry, when men go to work with other Remedies, that disturb the matter.

Crato.

Claudius.

XV. This is incident to all Diseases which come of a Catarrh, that the more we endeavour to evacuate and repel, the more we irritate the humours: And what is the reason? The humours go not whither we please, but whither the way is open; an unavoidable argument that the laxity of the passages is the proximate Disease: But why then do we use such things? That when the humours are diminished, the Disease may be shortened.

Hofmannus
in Inst.

XVI. I had a Patient forty years old, cholerick and lean, who had been four years troubled with a sharp and salt Catarrh falling from his Head upon his Lungs: I made him, at the beginning of the Cure, two Issues between his Shoulders, two inches on each side the *Spina dorsæ*; and I ordered him to apply a Cupping-glass upon them once a week: which Remedy did so much good in respect of the Serofities, which were drawn out in great quantity every time, that I must needs ascribe the whole Cure in a manner to it.

Jo. Marfianus,
ad Riverium, obs. 6.

XVII. I put a stop to a Catarrh falling violently upon the Palate and Throat, and threatening very bad Symptoms, when it would yield to no Remedies, by a Seton in the Neck, and so conquered and bridled its malice. When it has been worn some months, and after the Patient is recovered, an Issue either in the left Arm, or right Thigh, may not be amiss.

Claudius,
cof. 18.

XVIII. To hinder a Catarrh from falling upon the Breast, it is sometimes necessary to blister the Head, to the end that the Catarrh may be dissolved, and get out

out at the Skin, and not fall upon the Lungs; which nothing but very hot things will doe, such as put the whole body in a heat: Therefore it is dangerous in Fevers to apply hot things to the Head. Instead whereof I would have the Head shaved very close, and Powders (because hotter things cannot be approved of) of *Sandaracha*, *Mastic* and *Roses*, which do not heat violently, but dry and comfort the Head, so that the matter does not fall down.

Montanus,
conf. 145.

XIX. It is known, that in the descent of a Catarrh, which for the most part causes a violent Cough, things which irritate much doe hurt in the beginning. And I would have this carefully taken notice of, (for I have observed it) never to give irritating things, and such as help to raise Spittle near night or in the evening about bed-time: for if it be done, then Sleep is hindered by the commotion of the matter, and there is often danger of Choking, while the matter moved by violent straining to cough, is precipitated downwards on a sudden. Wherefore, that both Sleep may be promoted, the matter of the Catarrh concocted and thickened in time of rest, and the strength of the Head better confirmed, it will be good, while one sleeps, to hold Sugar of *Roses*, or something else in the mouth, that may thicken the humours, and to abstain from all things that provoke coughing: But if, after sleeping time is over, there be occasion for things that help to raise easily, let moderate ones be used, lest the disturbed matter create more apparent trouble, and the falling of the Catarrh be increased.

Oethaus apud
Schenckium.

XX. Sometimes Receipts to stop Defluxions must not be made of very sweet things, because of the Patient's palate; or rather, because over sweet things cause a Defluxion; As once I made some of *Acacia* and other tart, and not very sweet, things for Cardinal *Turaine*, whereby he found great benefit: For those holes, that are behind the *Uvula*, by which Phlegm is purged, are lax, and Phlegm continually runs through them: Therefore that part is to be strained: But let Spike and things ingratefull be omitted, and Cinnamon also being of thin parts, because it raises Defluxions.

Rondeletius,
p. m. 984.

Sylvaticus,
conf. 93.
cent. 1.

XXI. In a hot Catarrh cold Spaw-waters are good, for twelve or fifteen days, ten or twelve pounds a day, for while they pass by Urine, they open obstructions, and cool the Liver and Head, which will then grow dry. ¶ When the Head is dried, and the Lungs themselves in some measure, their exsiccation and strengthening must be perfected with sulphureous Waters, taken inwardly for twelve days, with something that is laxative: for a better Remedy cannot be found in the whole Art; which yet are no way convenient, except the Head be first dried, because they affect the Head, fill it, and melt the humours, and so encrease Diffusions, whereas nevertheless when the Head is dried, they doe it no harm, but dry it more.

Fortis, cent.
2. conf. 13.

XXII. Some Physicians propose Whey of Goats-milk for subduing a hot Diffusion: but I reckon it hurtfull, because though it cools, yet it moistens; and, which is of greater concern, it so fills the Head itself, that men obnoxious to Diffusions, by the use of Whey, fall into the Gout. ¶ I prefer the Spaws before Whey of Goats-milk, for Whey, as it is a moistner, cannot chuse but increase Defluxions.

Saxonia,
Præf. præf.

Sylvaticus,
conf. 93.
cent. 1.

XXIII. There can nothing more hurtfull be used in Diffusions, than such things as simply attenuate the humours: Which I would have the Moderns take notice of, who in cold Diffusions so willingly fly to Decoctions of *Guaiacum* and other attenuaters, not considering that by the use of these things Diffusions increase daily, which should be cured by Concocters and moderate Thickeners, as *Hippocrates* teacheth.

Martianus,
Com. in v. 14.
lib. 6. l. 2.
Epid.

XXIV. In a phlegmatick Catarrh it is a piece of rashness to hope for a Remedy by raising a Fever,

another way of cure not being first tried by evacuating, inciding, concocting and aperient Medicines; especially if you know the man to be one who is not lightly in a Fever: yet sometimes we must come to a Fever.

Valerius,
meth. med.
l. 2. c. 13.

XXV. It is an error of the Moderns, to use Decoctions in water for Fluxions; seeing it is evident, that whatever is taken in form of Drink, though it have a drying faculty, yet it always increases moisture in the body, especially if it be taken with food.

Martianus,
com. l. 1. sect.
2. de morb.
mili.

XXVI. *Avicenna* approves of bathing in sweet water both for a hot and cold Catarrh: If it be cold, he disapproves it, before maturation: In a hot one, he approves of it, because the matter gives way; but not in a cold one, because the matter is thick and viscid: If a Catarrh be imminent, he forbids it; because it moves the matter. And while the Patient uses it, he ought to sweat, for so the faulty matter is evacuated, and drawn to the out side of the body. ¶ When the Body is full, and the Diffusion yet crude, I think Bathing not convenient, because it melts the humours; otherwise it draws from the Head, and moderately digests.

Capivaccius.

Fortis.

XXVII. I have observed, in those Cities where Diffusions from the Head are familiar, (such as Rome is) that Women, onely by Washing their heads, are presently eased of their Head-ach, which has its original from a Catarrh. For by it the Pores of the Head are opened, through which the Vapours, that are retained by the Closeness of the Skin, and that increase the Diffusion, may exhale, and the acrimony of the humours is mitigated, which is the cause that Fluxion remains, and causes Pain. ¶ I do not approve of Washing, with a Decoction of cold and drying Herbs; because for the most part people offend in wiping it. But if either custome or necessity require it, a Ly with some Leaves of Red-roses and Myrtle may be used, so the Head be washed afterwards in cold water, and a hot Cloth, fumigated with Powder of *Roses* and *Storax*, be applied.

Martianus,
in vers. 14.
sect. 6. l. 2.
Epidem.

Crato apud
Scoltium
conf. 21.

XXVIII. Some disapprove of Fumes, building upon that of *Hippocrates*, aphor. 28. 5. But if, when the Body is purged, and the Veins of the whole habit abound not with bad hot Juices, they be made use of, it is certain they sometimes help a cold Brain; such as are made of *Nigella*-seed, *Frankincense*, Sugar, hot Vinegar, Powder of *Storax*, with Sugar and a little white Amber. You may refer hither Smoak of Tobacco, which draws much phlegmatick humours into the mouth; *Hearnius*, l. 1. meth. ad praxim mentions it. Tobacco (saith he) taken in smoak is endowed with a wonderfull virtue, for it brings away great plenty of Phlegm out at the mouth and nostrils: The dry leaves are cast upon hot coals, and the smoak is taken in at the mouth wide open, by a narrow funnel: for it goes through the whole brain; and it may be got into the ears or womb the same way. I can affirm, that this herb is peculiarly adapted to the brain, that it easily affects the way thither, and doth cleanse it from all filth. But the frequent smoaking it does violence to nature, especially in young and cholerick Bodies; as it does good to cold and over moist Brains, that overflow with Water and Phlegm. Let this be the principal Caution, that it be used for necessity, but not for wantonness, there must be sparingness and measure; first, let the whole Body be purged, and then the Head with Sternutatories. *Crato* in *Scoltius* condemns much Fuming, which, he saith, must be avoided by People subject to Catarrhs, and such as have a Weak head: And he condemns the custome of the *Italians*, who heat some Tow in the fume of *Frankincense* or Amber, or some such thing, and apply it to the coronal Suture; affirming that they doe hurt, by stopping the matter of the Catarrh where it is in great quantity, and especially if the Head be hot. But lest the Head should be oppressed, let the Cloths be fumed without the Chamber.

N

XXIX.

XXIX. Plasters applied to the head stop the Defluxion for a time, afterwards the whole matter falls down on a sudden, whence comes sudden suffocation: It stops for two or three days, because it suspends the Catarrh; but in the mean time this increases, and by its sudden descent in two hours time kills a man.

Montanus.

XXX. In a stubborn destillation of the head I allow of Fomentations by the frequent applying of bags filled with Millet, Bran, Salt and Marjoram, but with rubbing with warm cloths; that the heat may reach deep, and concoct the humours: for no man can be ignorant that frictions must not be used in destillations of the head.

Zecchiuz;
Conf. 20.

XXXI. Anointings proposed by *Trallianus* are to be omitted, as useless in a cold Catarrh, and suspicious in a hot one. *Galen* 3. *Metb.* 13. applied Rubificants of Pigeons dung and Stavesacre with good success in a hot Catarrh, to draw back and divert the violence of the defluxion, but not to take away the cause; therefore *Trallianus* found fault with him without a reason: Yet I think we had better not meddle with these two Medicines, since it is not granted us to imitate him in all things; onely indeed they are safer in a cold one, yet suspected when there is a sympathy with the parts below. *Aetius* also is of the same opinion, and subscribes to *Galen* himself, who 6 de *San. ch.* determines the contrary. Wherefore it is safer in the beginning to apply our selves to revulsive, diverting and intercipient Medicines.

Fortis, conf.
14. cent. 2.

XXXII. A drying Diet seems convenient by the law of contraries, because abounding moisture makes the Catarrh. But what is the material cause of Catarrhs? A multitude of phlegmatick, thick, tenacious and cold humours: now consider well whether Plenty do not require evacuation, thickness attenuation, toughness detersion, or inciding cold heating: what vacuation a drying diet makes, will not take away a great quantity, because onely thin and serous humours are evaporated by it, the thick are made more stubborn: Neither will it attenuate or absterge the humours, for the heat acting upon the humours, first consumes that, which can easily be transmuted into Vapour, and acts but dully upon the thick and tough humour, which should first be consumed, seeing it causes and encreases the disease: Nor is the heat of any use that is procured by a drying diet; for all heat, when it hath not whereupon to act, preys upon the radical moisture: Therefore a drying diet is useless, both because it deprives the body of nourishment, and because it renders the humours more stubborn. Tough humours in the body are made fluid the very same way, as Artificers Glew, which is made liquid not with dry things but moist. *Galen* treating *Lib. de atten. visci. rat.* about the expectoration of those things that oppress the Lungs, saith, that what is got out of the Lungs, must not onely be incided and made hot, but must be moderately moistened, lest the spittle be hardened and made tough. But the humours that are carried to the head can be attenuated no other way, than they in the Lungs. *Galen* indeed saith there, that bodies in which cold, thick and tough humours abound, are relieved by the use of attenuating meats: But this opinion must not be translated from Bodies to Humours, which must not be attenuated by actually dry things, but by supplings wherein inciders are boiled, and those actually liquid.

Borallus de
arrho, cap.
10.

XXXIII. The choice of a convenient posture for the Head, hath respect either to the ascent of matter to the head, or to its descent from the head upon the parts below. As for the Ascent, it is certain that the humours will get to the head with more difficulty in an erect posture, than in a leaning one, because the humours by their proper gravity run downwards of their own accord; which every one may easily experiment in his own hand, if he let it hang down. As for what concerns the descent of

the Catarrh, it is undoubted that the humours contained in the head will descend more readily in an erect posture by the help of their innate gravity. Therefore if the parts receiving the Catarrh be more grieved than the head that sends it, a leaning posture is proper for it. But if benefit accrue to the head, by unloading it self upon the more ignoble part, then put an high pillow under the head. And according to *Celsus*, *lib. 4. c. 4.* if there be difficulty of breathing, which often happens in a destillation, the Patient must lie with his head high.

XXXIV. Exercise of all the lower part is very necessary, for for this very reason Weavers are not so much troubled with Catarrhs, because they exercise their feet much.

XXXV. *Hippocrates* 6. *Epid.* writes indeed, that *Venus* is good for phlegmatick diseases, the abundance of Phlegm being dried up, where there is strength for it. Yet from hence we may not infer that it is good for people in a Catarrh, nor yet from the history of *Timocharis*, who, he saith, had a destillation in winter, especially upon his nose, and when he had used *Venus* it dried up: His nose indeed grew dry; but it is ill concluded from thence that his disease was cured; seeing *Hippocrates* subjoins that lassitude followed, and heat and dulness in the head, diseases worse than the Catarrh. *Saxonia* thinks this opinion of *Hippocrates* applicable to hot Catarrhs.

XXXVI. *Calligenes* (*lib. 7. Epid.*) in the Twenty fifth year of his age had a Catarrh, and violent cough: he brought up what he raised with great violence, nothing staid below that fell down, this lasted four years: Hellebore did no good, but a moderate Diet, and to macerate the body, to eat bread, to abstain from sharp, salt, fat things, *succus Silphii* and raw hearbs, to walk much: Drinking of milk did him no good, but drinking pure *Sesamum* with soft wine. Hence it is manifest, the Catarrh came not so much from a multitude of humours in the whole body, or in the head, as from a proper intemperature of the Brain; so that the excrements did not so much cause the intemperature, as the intemperature caused the excrements: for if excrements had been the chief cause of the disease, purging would have done good; but because the intemperature was the first cause, and the intemperate Brain did breed matter for destillation, of its proper aliment, which it badly assimilated, Hellebore did no good, but abstinence from meat, and to grow lean again with fasting: for so Aliment was subtracted from the Brain, and in penury of it there was less superfluity to destill, and the Brain was dried with fasting, and so the moist intemperature of the Brain came to be amended. Moreover he was hurt by hot, sharp, salt and fat things, because such things, beside their heat, have qualities that exasperate the Lungs, and provoke coughing: for sharp things prick, salt exerce and corrode, fat cause some tickling: He was hurt by *succus Silphii*, which is sharp, hot and windy, because thereby his head was filled and made hot, and for that reason his destillation ran the more: Raw herbs hurt him, because a gross vapour, that fills the head, was raised from them: Drinking of milk was not proper, because it is bad for the head-ach, and upon the same score likewise for them that are apt to have their heads filled, though without aking, wherefore it must be avoided by People subject to Catarrhs: Much walking did good, for it is a dry cause: But understand withall, seasonably, for otherwise he had better not have walked at all: Friction also had been good, and watching, so it had not been too much: His meat was bread, a food truly every way moderate, and without all fault, unless too much be eaten: He was relieved by drinking soft wine and pure, crude *Sesamum*: Soft sweet wine is good for a cough, and for them that cannot raise by spitting, as also is *Sesamum*, because of that smooth Mucilage it hath. Which Potion is more

Vallesius,
com. in loc.
611.

more accommodate to diseases of the breast than to a Catarrh from intemperature of the Brain: Certainly it could do the Brain little good; yet it did good, because it would suffer nothing of the defluxion to stay below.

XXXVII. N. Fifty five years old, of a hot and moist complexion, after many errors in living, especially cares of the mind, studies and drinking strong wine, born of Parents who were subject to Catarrhs, was taken with a distillation from his head upon all the right side of his body, with a little immobility of the tongue, and of the arm and leg on the same side; all which diseases nevertheless gave way to convenient remedies, onely some dullness, and a sense of weight remaining in his right arm and leg, which hindered him from going about his business: He complained also of some weakness in his head, so that when he looked upwards or downwards, on one side or the other, and brought his head again into its natural posture, he remained dull as it were stoned; yea, sometimes he staggered: And although he had an Issue made for it in his neck, and right arm, yet he found no good by them: He tried the Leaden waters to no purpose. *Prevotius* advised him with good success to medicinal wines, Turpentine with *Castor*; a decoction of box, *China* root, Mistletoe of the Oak, Mastic Tree, Sage and Groundpine: Besides, Treacle with Sugar of Roses: And among external things, Goose grease with Spirit of Rosemary applied with Scarlet to the nape of his neck after embrocation.

V. Vallesius,
Obs. 14.

Medicines especially made use of by eminent Physicians.

Aecorom-
bonus de Ca-
tarrho.

1. I affirm I have seen several cured by the continual use of *Diacodium*, who have been in manifest danger of a Consumption from a thin and salt Catarrh. ¶ Take of Cloves, Cinnamon, Mastic, Mace, Benzoin, each 1 drachm, Cipresnut, red Coral, Pomegranate flowers, each 2 scruples, mix them, make a powder, and apply it to the Coronal suture; both I and others have often tried the virtue of this powder, and we have found it stop distillations in so short a time, that it has appeared wonderfull both to our Patients and us.

Idem.

Agricola.

2. The tincture of *Luna* is very good for distillations; Take of Spirit of Vitriol 4 drops, Tincture of *Luna* 8 drops, Water of Mother of Time half an ounce, Oil of Amber 5 drops. Mix them, give it every day. ¶ This is a secret for Catarrhs never enough to be commended. Take of white Sugar 3 pounds, Root of Liquorish, Elecampane, Flower de Luce, each 2 ounces, Spring-water 24 pounds. Boil them, filtre them well. To 8 pounds of the Colature add of the herb Speedwell, Maiden-hair, Lung-wort, Scabious, Horehound, the cordial flowers, Colts-foot, red Poppy, each 5 Pügils, Roman Nettle seeds, and of seeds of *Cardus benedictus*, Anise, Fennel, each half an ounce, infuse them 2 days, and boil them again to a third; add of Gum *Guaiacum*, *China* root, each 2 ounces, Cinnamon, lesser Cardamome, Cloves, each 3 drachms: boil them over a gentle fire for an hour, filtre them, and strain them. Drink of it four or five times a day.

Idem.

Bartolettus.

3. In a suffocative Catarrh I use with great success water of Violets or Colts-foot, with white Spirit of Sulphur, dropt in drop by drop in danger of suffocation; and I have delivered several from imminent danger.

Petr. Bay-
rus.

4. Take of Aloes, Peiniroyal, Calamint, Mint, Citron rind, each a like quantity, make a powder; incorporate it with *Ladanum* and a little *Acacia*; and apply it to the Coronal suture, having first shaved off the hair.

Alex. Bene-
dictus.

5. Terra Lemnia, or Bole Armenick, with wine is a most excellent Remedy in a cold Catarrh; for they effectually hinder suffocations.

6. A decoction of Turnips with butter and Sugar

is very good, or if there be any wind in the Turnips, it may be corrected with a drop of Oil of Aniseeds. *Crato.*

¶ In a salt Catarrh I have found this a most wholesome remedy. A Decoction of Honey with Roses, which is made thus: Take of pure water 6 measures, Honey half the quantity; boil it, and scum it, put a bag full of dry Roses in it, and boil them for a convenient time. Drink of it every morning. Also red Bole Armenick laid upon the Tongue and Palate at night especially, stops and dries a Catarrh, and wonderfully strengthens the head, so as it seems an Inchantment, it is as good as any Treacle. *Idem.*

7. A Lohoch of Oak of *Jerusalem* in diseases of the Breast is excellent for the Distillation falling on the Breast; it is made thus: Take of the juice of Oak of *Jerusalem*, Scabious, Speedwell, Colts-foot, each half a pound, Barley Cream 3 ounces, Sugar half a pound. Boil them to the consistency of a Syrup; add of *Species Diarvens simp.* half an ounce, powder of Aniseeds 2 drachms, Flower of Brimstone 1 drachm. Mix them. *Gul. Fabricius.*

8. This is very good; Take of Rosemary, Marjoram, *Nigella*, red Roses, Cloves, Nutmeg, Indian Spike, each half a drachm. Make a Powder, take it in a Pipe fasting like Tobacco. *Goclenius.*

9. In a thin suffocative Catarrh distilling violently upon the *Asperia Arteria*, and raising a continual cough, a little burnt Hartshorn held onely in the Mouth, or put upon the Tongue, is accounted an excellent Remedy: for the Catarrh is presently thickened, and the cough comes but seldom. ¶ Oil of Amber hath an admirable efficacy to stop a Catarrh, if some powdered Amber be put in a bag, and heat in Spirit of Wine, and sprinkled with some drops of Oil of Amber, and applied to the Crown of the head, the nostrils and Temples being both appointed with it at the same time. *Graba in Elapthograp. 212.*

10. This is an exceeding good sternutatory to dry and stop the Catarrh, and strengthen the Brain. Take of Darnel, Seed of *Nigella*, *Castor*, each 1 scruple, Marjoram, Rosemary, Sage, each half a scruple, Musk 4 grains. Mix them, make a powder, and snuff it up. Linseed infused in strong white Wine Vinegar, then dried, and strowed upon some coals, its fume received by the nostrils doth wonderfully stop a defluxion. ¶ The distilled water of flowers of white Dittany is also a celebrated Remedy, snuffed up into the Nostrils. ¶ This promotes expectoration of the thick matter: Take of the powder of Elecampane seed half an ounce, Savine seed 2 scruples, Honey 2 ounces, fresh Butter 3 ounces. Mix them. *Petr. Mich. el de Heredia.*

11. Sassafras wood is of excellent use in this disease, so that it is reckoned the true and proper Alexipharmack of Catarrhs, especially if it be infused with Spirit of wild Time, which is done thus; Take of field Mother of Time, distill it from strong wine, let it stand a few days, and distill it from fresh Mother of Time, and then infuse Sassafras wood in it. ¶ Nothing stops immoderate Catarrhs better than the following Cataplasme: Take of fowre leaven 2 ounces, Amber powdered 2 drachms; make a Cataplasme, and apply it to the Crown when it is shaven. ¶ Also in a suffocative Catarrh, Tacamahaca dissolved with some Oil of Mastic, spread upon leather, and applied to the Crown of the head, when it is shaven, is very good. *Frid. Hoffmannus.*

12. For a Catarrh with hoarseness I have had good success in this Medicine of *Forestus*: Take of Liquorish juice, white Sugar, each 2 drachms, seeds of Purilain, Cucumber, Melon, Citrus, each half a drachm, Aniseed, Gum Tragacanth, each 1 drachm, Penidy of Sugar 2 drachms and an half. Make them into sublingual Pills. ¶ I have had experience to my honour of this Electuary in several, in difficult expectoration, which threatned a Consumption. Take of Elecampane Root, Quinces, boil them with Honey, and add some flower of Brimstone. ¶ In thin distillations I successively use *Pilule de Styrate Cratonis.* *Gr. Morbidi.*

Johnstonus. 13. Pope Adrian's Wine is highly commended for a Catarrh: It is made of the Shells of all the Myrabalans, with their Kernels, first dried, each 2 ounces and a half, Cinnamon 1 drachm, Cloves, Galangal, Cubebs, Cardamome, Grains of Paradise, Nutmeg, each half a scruple, dried red Roses a drachm and a half, Flowers of Rosemary, Lavender, each one drachm; bruise them, and put them in as much Wine as is convenient.

Dom. Leo. 14. This is an experienced Medicine in stopping all Distillations, and very good for those that incline to the Phthisick and Consumption, and that are troubled with a Cough. Take of Cinnamon, Galbanum, Storax, Calamus, Pepper black, long and white, each half an ounce, Opium 3 drachms, Honey what is sufficient. The dose is the quantity of a Bean, taken morning and evening in Honey-water.

Lotichius. 15. Nothing better can be devised to digest, attenuate and evacuate successively by sweat matter settled in the Lungs, than a Decoction of Guaiacum-wood; which others as well as I have used with singular success, as the Bezoardick of this Disease.

Simon Pauli. 16. An easie Medicine is made of water in which unripe Quinces are boiled, against sharp Catarrhs, that are most troublesome at night: It must be well sweetned with Sugar, a spoonfull or two of which must be given to the Patient when he goes to bed.

Sennertus. 17. This is a very good conserve to stop a cold Catarrh: Take of red Roses 2 ounces, Species Aromatici Rosati 2 scruples, Nutmeg 1 scruple, white Frankincense 2 scruples, with Syrup of dried Roses or of Betony, make an Electuary. Take the quantity of a Walnut when you go to bed.

Arnold. Villa novanus. 18. Very good Pills to stop any Rheum flowing from the Brain, and to comfort the Brain. Take of Amber, Lignum Aloes, Ladannum, Frankincense, Storax Calamita, Myrrh, each 1 drachm, Wax, Opium, each 1 scruple, Musk 4 Grains; with very good wine make small Pills; give 7 of them late at night. This wonderfully stops a Rheum from a cold cause.

obstructions of the veins in the Womb would be greater, when their fulness were encreased.

III. In reference to the Cachexy, Medicines should be administered, which depurate the fleshy part, and clear it of bad humours, i.e. Diaphoreticks, insensible evacuators, and insensible digesters: To which intention sweat would answer, some convenient Decoction premised, or the use of Viperine Powder. But because our main scope should be to open the veins of the Womb, provoke the Menstrua, and purge the whole body by ways proper and customary to nature; therefore lest the humours should be diverted from the centre to the Circumference, laying aside this intention, we must first make use of aperient Hystricks, and promoters of the Menstrua.

Fortis Conf. 52. cent. 2.

IV. Because in this Disease Steel is very usefull and necessary, we must in this case take notice, whether the Veins about the Stomach and Mesentery, or the Liver and Spleen be more obstructed: for if the proper vessels of the Stomach be most obstructed, Steel must be given prepared in a more gross manner, and vomiting Medicines may be mixt with it, or a vomit may be given before the use of Steel, or on the intermediate days: for so, when the bad humours are cast up by vomit, the Bowels do easily recover: But if the humours hanging in the places near the Stomach, be carried to the more inward parts labouring of obstructions, the disease will be made worse. But if the Liver be especially obstructed, Steel must be given prepared very fine, and Epatick Medicines, and such as purge downwards, but by no means such as purge upwards must be mixt with it: And if the Spleen be affected, splenetick Medicines must be added.

Sennertus.

V. The Physicians School doth profess that Steel obtains the chief place in stubborn obstructions, which yet must neither be powdered too fine, nor burnt too much: For the former degenerates into Quicksilver, and then it provokes vomit and purging. The latter is deprived of its Sulphur and Mercury, by which means it becomes rather an astringent Crocus Martis, than opening: Wherefore in this case a Crocus Martis prepared with Spirit of Sulphur will be most convenient.

Fortis.

VI. Whether is Tartarum vitriolatum good in this disease? I hold the affirmative, because such Medicines are convenient, as incide the cold and viscous humours, and attenuate them, concoct crudities, open obstructions, and absterge the sticking matter, all which virtues are most efficaciously in Tartarum vitriolatum: for if Tartar considered by it self have no small aperient and absterging virtue, much more must be allowed to it Vitriolate. Yet we must have a care we proceed not inconsiderately to the use of this Medicine, nor presently; but the first ways must be prepared before by lenitives: which done, when we have purged twice or thrice gently, we may come to the use of it, yet according to the difference of its nature, a whole scruple, or an half, may be given twice a day in some proper distilled waters, or decoctions in which some convenient herbs and roots have been boiled: then the prepared matter may be purged and carried off by an infusion of Rheubarb.

Horslius cent. prob. 9. 24. 5.

VII. Before the use of attenuating and opening Syrups, the common ways must be purged, namely, the Stomach and Guts, from excrements and crude humours; lest the same things befall us which befell a certain Physician, who when by aperient and attenuating Syrups he would have brought her Menfes, he threw her into a Palfey. ¶ The Stomach must first be emptied by a clarified potion of Manna, or lenitive Eleatuary with Tartar, then we must come to the preparation of the first ways by repetition of the aforesaid things: Then the obstructions of the Mesentery and Lactéal Vessels must be cured with attenuating, opening and evacuating Medicines. But to complete the detersion of the Stomach and Bowels, some

Rondelerius, l. 1. c. 31.

Chlorosis, or, the Green-sickness.

The Contents.

- Whether Blood may be let? I.
What Vein must be opened? II.
Diaphoreticks must be slowly used. III.
Steel must be differently prepared according to the diversity of the parts affected. IV.
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Whether Exercise be convenient? IX.
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Whether Marriage be proper? XI.
Medicines.

I. Blood must be let, when the disease is new, and when it takes its rise from stoppage of it, before it acquire a malignant quality, sufficient strength and plenty of blood being supposed: Otherwise the disease would grow worse, if it be thoroughly radicated, if the Body be cool, and if phlegmatick, crude humours do rather abound than blood.

Ambros. Enchir. Med. Prae.

Fortis conf. 52. cent. 2.

Riverius.

II. A vein in the arm must be opened in the beginning, although the Menstrua be suppressed; for if blood should be then taken from the foot, the

some proper Spaw-waters may be given three days. The Cacoehymie must by degrees be taken from the blood by preparation and frequent purging. Nor must we fear Feverishness; for in this case we must have an eye onely to the Cause, and not look much upon the Fever. These three sort of purgers being taken, we must not believe that the whole

Forti, l. de Venous kind is cleared of its impurity, wherefore purging must be repeated, which may also have an opening virtue.

VIII. In uterine and hypochondriack distempers, seeing Sugared or Honeyed things doe not much good; therefore in the preparation of the Humours, clarified juices of herbs must be put in the Decoctions. Forti tranfcolates the juices through Sand, to purifie them.

IX. Whether should motion and exercise be prescribed to those that are sick of the Green-sickness? Idleness and Motion are equally hurtfull. Idleness, because it gives opportunity for heaping up of Crudities, whereby the disease increases: Motion, especially violent, because it raises the palpitation of the heart, which often endangers Suffocation: for the crude humours are put in motion, whence Vapours are elevated to the heart: Besides, green-sick persons are unfit for exercise, because their body is dull, their strength languid, and they are troubled with shortness of breath. But as exercise in this disease, towards the height, is unseasonable, so before it get any head, and when it is declining, it is very profitable; for the languid heat is excited in the bowels, concoction is better performed, distribution of the Aliment is helped, obstructions of the bowels are opened, motion is given to the humours, and way is made for Medicines: Yet a mean must be observed, and general evacuations must be premised.

X. Whether may the absurd things, which the Appetite craves, be allowed? We may sometimes indulge Women with Child; because the bad meats, which they long for, may serve for Medicines; or because if they should be denied, the Child might be marked, which would be worse. But these bad and absurd things doe Virgins harm, because the disease is thereby fomented and increased; nor can any emolument accrue to the body, or ought of the morbid cause be abated by such things as Lime, Chalk, Ashes, Oatmeal, &c. The grief arising from the denial of their desire is momentary, but the damage from such things is lasting.

XI. It is a common opinion that Green-sick Virgins, when they are Married, recover their health, and truly sometimes it happens, that pale and discoloured Maids, if they Marry, become lively, and acquire a rose colour in their face and body: On the contrary it is found, that others have not onely after Marriage not recovered, but grown worse. There is need therefore of distinction: for if the Illness have its rise from the retained Menfes or Seed, it is the safest way to Marry, for so the retained Seed is evacuated, and the Womb is purged: But if there be any evil disposition in any Viscus, especially the Liver or the Spleen, or in the whole body, this is not removed by the use of Venus, but rather increased, and the bad humours that abound in the whole body, are drawn to the Womb, and raise obstructions in it, whereupon long Fevers, and other evils arise: Such must be cured before Marriage, or if they be incurable, it is better to remain unmarried.

Medicines especially made use of by eminent Physicians.

1. The following Electuary of Steel is very good in obstructions of the inwards, especially in the Green-sickness. Take of Filings of Steel very fine, grind them with Vinegar, and dry them, this should be done seven

times. Take of this 6 ounces, Cinnamon, Candied Nutmeg, each 3 drachms, Rheubarb 2 drachms, Spec. Avomat. Rosat. 6 drachms, Honey and Sugar each 1 pound. Mix them, make an Electuary; but universal Purgation must precede.

Crato, obs. 1. Jing. Ep. 244.

2. There is nothing better than Quinifessence of Camint to cure the Pale, Wan-colour in Maids, for it most certainly and successfully promotes the Menfes.

3. They say, that in the Green-sickness from obstructions in the Spleen, an ointment of Ostridges greafe is very good: Some say nothing is more effectual. It is evident from observation that Bezoar-stone is very good, especially for Melancholick Women, taken in some appropriate water. I have experienced that Scorzonera Root steeped in some proper liquour and drunk in a morning, hath cured several. The best thing in the world for this Disease, is the water that runs from a Grind-stone whereon Swords are ground, if you quench red-hot filings of Steel an hundred times in it: for so I have seen large Splens wasted.

Mercatus.

4. In this Disease I have experienced the wonderful effects of Quercetan's Cachectick Powder, by means whereof I have cured innumerable Maids and Women of the Green-sickness.

Riverius.

5. The following Pills are kept as a Secret by many; Take of Juice of Mercury, clarified Honey each 1 ounce. Boil them to a sufficient consistency. Add of the Seed of Roman Nigella powdered 3 drachms. Make a Mass, of a drachm whereof make 6 Pills. Take two when she goes to bed for three nights one after another.

Varandius.

Cholera, or a Vomiting and Loosness.

The Contents.

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Whether a Vomit may be given? III.

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Manna, and all things made of Sugar, suspected in a Vomiting and Loosness. XVI.

Medicines.

I. **W**hen the Vomiting and Loosness is stopt by the use of Medicines, and the strength something restored, the Patients seem out of all danger, which does not onely deceive the by-standers, but even the Physicians sometimes: for after one or two days quiet and intermission, the Symptoms return stronger and more violent, and carry off the Patient, who was weakened with the first fit of his disease. Which great danger must be obviated, not onely by Restoratives, and things that assuage the heat of the humours, which must be continued when the fit is over; but by letting blood, which draws back, and very much qualifies the torrid and boiling blood, and it must be repeated twice or thrice, if it appear after the first blood-letting that the strength is nothing abated, but rather augmented. Some in the very fit, and when the strength is exceeding

Horslius, cent. prob. 9. qu. 5.

Sennerius.

Sennerius.

ceeding low, which they say is not wasted, but oppressed, do open a vein: But with great hazard; for some have died in very bleeding, to the great reproach of the Remedy. It is true, there is some oppression, but then there is wasting of the strength likewise. Therefore it is better first to stop its violence, and when the Symptoms are laid, to have recourse to blood-letting.

Riverius.

II. If a Woman with child be taken with a Vomiting and Loosness in her seventh or eighth month, whether may she safely be let blood? If it be suspected in those that are not with child, lest the strength tired and wasted by great inanition, be wasted and sink more; much less may it be done in a Woman with child, who hath suffered already plentiful and immoderate evacuation from her veins: Besides, it proves abortive, while it deprives the Child of its nourishment, and the Mother of her Treasure. It is dangerous and hazardous thus to cure a Woman with Child: For if it be disapproved of by all Practitioners in a Man, and in Women that are not with child, it must much more be avoided in a Woman gone seven or eight months with child: Because to do it sparingly, is useless; for what is the emptying one small Blood-vessel like to do towards bridling the fury of the humours, or extinguishing the Fever, when the blood comes out but slowly, and the purest too, drop by drop.

Riolanus.
Enchir. l. 2.
c. 36.

III. Whether is there any use of Vomits? Hippocrates 5. Epid. cured an Athenian of a Vomiting and Loosness, by giving him Hellebore: but in lib. de affect. he would have the cure managed with moistening potions, and hot bathes, that if there be any thing hurtful in the Stomach, it may more easily be vomited up, and more readily be carried downwards, because if you evacuate violently, i. e. if you will carry off the reliques of the humours by Purging Medicines, a violent evacuation both upwards and downwards will follow, whereby the weakened Patient will be in danger. The contradiction is solved by this distinction, When it arises from Surfeiting and Drunkenness, as is supposed in the present case, because the corrupt food, that is the cause of the disease resides in the Stomach, and no fault of the whole concurs, we must not fly to Purging Medicines, which draw the Humours from the whole, where there is no fault, for so that would be Purged which ought not, and a disturbance being made in the humours, the conflux of them to the Stomach would be increased, weakened by the disease, and not a little hurt by taking of Physick. But when the disease depends on plenty of bile and other humours, which flowing to the belly, burst out Symptomatically upwards and downwards, then the total purgation of them must quickly be procured; and they must be carried off the less dangerous way, which is contrary to that way whereout they break naturally with greater violence. In the Athenian he gave a strong Vomit, because the humours that fomented the disease were peccant in the whole, and were carried more violently downward than upward.

P. Martianus
in v. 12. Sect.
2. lib. de
aff. c.

¶ When the Intestines are more affected than the Stomach, Vomits were better than Purges, that both evacuation of the whole body, and revulsion from the part principally affected might be made: for the thing we most fear in affections of the belly, is, that the body cannot be purged but by the part affected: therefore we must avoid it as much as we can, and if all parts of the belly be not sick alike, we must move by that part which is less sick; much more therefore in dysenteries, must we use Vomits. ¶ Hippocrates gave Hellebore to an Athenian; but though I like his method well; yet I approve not of his Medicine; there are much safer and more usefull Medicines, that Vomit far more mildly. ¶ They offend grievously that give Scammony, Hellebore, and Colocynthis in this disease; for a hypercatharsis (or over-purging) is raised, which a Convulsion (very familiar to this disease) swoon-

Vallesius, l.
5. Epid.Mercatus, l.
3. Pract. c. 8.Enchir. Med.
Pract.

ing and death doe follow. ¶ Add hereto Oribasius his rule, l. 7. If corruption of the food appear to you at the first, and the Patient void nothing in a manner either by Vomit or stool; but if he be squeamish and reach to Vomit, then we must give those things that promote Vomit freely, such as is Honey with Water, which makes a Man both Vomit and Purge. ¶ If Vomiting cannot be stopt (saith Sylvius de le Boë, l. 1. c. 15.) by reason of the plenty of humours that are in the body, and affect a passage upwards, nothing hinders us to give a gentle Vomit, those things being also added which may temper the humours, and in some measure appease and restrain their too much effervescency, as also upon urgent necessity Opiates in a small quantity. e. g. Take of Oxyfaccharum vomitivum 2 drachms, Laudanum opiatum half a grain, or a whole one, Mint Water what is sufficient. Mix them, make a draught.

IV. Things that restrain the violent motion of the Choler, Julapium Rosatum mixt with juice of sowre Pomegranates, Syrup of Quinces, Myrtle-berries, Enchir. med. Rosés and the like, must not be dissolved in water, Pract. lest the Coats of the Stomach be made more lax, which should after be strengthened and astringed, but they must be taken alone in a Spoon.

V. In diseases of this nature, wherewith preternatural evacuations are joined, Astriction is often attempted in vain, and not without great danger, before the abundance of excrement be voided; When therefore evacuation seems to have gone far enough, and strength is not much wasted (for some signs of debility may be born by reason of the Symptoms) we must neither stop nor provoke it, we may onely obviate other Symptoms: But if evacuation seem to have gone beyond the abundance of Excrement in the body, or beyond the strength of the faculty, we must stop it presently. But if the irritation, pain and anxiety be greater than the quantity of evacuation, and the evacuation less than the quantity of excrements, you must Purge, that when the abundance is plentifully evacuated, you may obviate the Symptome that consists in too much expulsion. And because the Symptome is urgent from the beginning, and because the irritation is never quite taken away in this disease, we must neither when we purge neglect the Symptome, nor when we stop, must we be forgetfull of the irritating juice: but we must mix something astringent with Purgatives, and something Absterging, or to take off the sharpness of the humours, with Astringents, or use them by turns.

Vallesius,
comm. in l.
5. Epid. p.
467.

VI. A moist Choler is a fierce and plenteous evacuation of bile upward and downward, proceeding from heat of the Stomach, which is stopt by cooling and astringent things, both taken inwardly, and applied especially by the use of Spaw-waters and Laudanum prudently given: We must abstain from hot Cordial and Stomach Powders, because they provoke and vellicate the Stomach. The Physicians of Paris bleed extremely, even when the Pulse fails, to avert the danger of a Gangrene from suffocation of heat in the Stomach.

Riolan. En-
chir. l. 2. c.
23.

VII. If there be fear that the Malignity hath dispersed itself beyond the first region of the body, for the better discussion of the impressed malignity, it is convenient to take inwardly Sweats with Alexitericks. But they must also have an astringent faculty, such as terra sigillata, burnt Hartshorn and prepared.

Sennertus,
Pract. l. 3. p.
1. Sect. 2. c.
13.

VIII. We must observe carefully, that if the Physician be not called till after the Patient be spent with Vomiting and going to Stool for some hours, may be ten or twelve together, and when his extreme parts begin already to be cold; I say, in this case, omitting all other remedies whatever, we ought to-rights to have recourse to the sacred anchor of this disease, I mean Laudanum, which must not onely be given while the Symptoms are urgent, but also when the Vomiting and Diarrhea are ceased, it must be repeated morning and evening

Sydenham,
de morb.
acut. p. 245.

ing every day, till the Patient have recovered his strength, and at length his health.

IX. I am taught, by sedulous application of my mind, and by manifold experience, that if on the one hand I should endeavour to expell these sharp humours, that are the fewel of the disease, by Catharticks, I should just doe as he that endeavours to quench fire with oil, seeing the operation of the most gentle Cathartick, would but give farther disturbance, and raise new tumults: And on the other hand, should I at the very first restrain the primary effort with Narcotick Medicines and other Astringents, whilst I hindered natural evacuation, and detained the humour against Nature; the Patient, his enemy being inclosed in his bowels, would undoubtedly be destroyed by an intestine War. For these reasons therefore I thought I must go the middle way, that I might partly evacuate, and partly dilute the humour. And by this method, found out and approved by me for several years last past, I have reduced this disease several times to good order. A young Chicken is boiled in about three Gallons of spring-water, so that the liquor hath scarce any relish of the Chick; The Patient is ordered to drink several large draughts of this a little warm, and at the same time a good quantity will serve for several Clysters to be given successively, untill, what upwards, and what downwards, all the broth be consumed, and given back again. So the Stomach being often loaded with a considerable quantity, and, as I may so say, turned, and the injection of Clysters being reiterated, the sharp humours are either turned out, or their acrimony being taken off, they are recalled to due temper. This washing-task being over, which takes up two or three hours time, some Paregorick Medicine puts a conclusion to the cure. I use this much; Take of *Coslip-water* 1 ounce, *Aqua mirabilis* 1 drachm, *Laudanum liquidum* 14 drops. Instead whereof any Shop Narcotick may be made use of. And this way that I have proposed, of diluting the humours, is much safer and more expedite than that is commonly taken to stop this most dangerous disease, either by evacuators or astringents, because by them the tumult is higher and fiercer, and all things are put in a hurly-burly: These on the contrary detain an enemy in the bowels, and, of a stranger, do plainly make him an inhabitant: To say nothing, how when the disease is protracted in length, besides the danger of its tarrying, whereby at length the bad humours creep into the mass of blood, and easily kindle a malignant Fever, the tedious trouble of a most grievous disease is created to the Patient.

X. In the 1654, before the Plague broke out at *Nismes*, the disease called *Cholera* raged very much, which killed many people in four days time: but they that took advice at the first onset of the disease, did almost all escape by this Method: When I conjectured the Patients had Vomited sufficiently, I gave them some aromatized soft Marmalade of Quinces, or simple Marmalade if the Fever were high, in a Spoon two hours before Supper, either keeping them from all manner of drink, or allowing them but very little, though they were tormented with unquenchable thirst; for drinking increases the Vomiting and Loosness, whereupon inevitable death follows: I helped the numbness and convulsion of the Legs with hot oil of Chamæmil: For the Vomiting and Loosness, I embroached the whole region of the Belly with oil of Nard, Mastick, Quinces, and I strewed thereupon Powder of Coriander, Mastick, &c. They also took an Electuary of Conserve of Roses, preserved Myrobalans, Powder of Pearl, Coral, Ivory, made up with Syrup of Corinths and Quinces. Sometime when strength was good, in the beginning of the disease, I gave Rheubarb in Substance, not omitting Cordial Epithemes. So they almost all recovered their health. In children that were emaciated with such a flux, or

a colliquative one, especially in Summer time, I persuaded them to use Clysters moist, made partly of strengthners, partly of restoratives.

XI. A Man Seventy years old was taken with a grievous Vomiting and Loosness, and in seven days he was cured with these four Remedies; A Clyster made of Milk, *Confectio Hyacinthi*, Conserve of Roses, and Yelks of Eggs; An astringent and strengthening fomentation of the stomach, with bags steeped in Red-wine; A Julep made of a decoction of *Plantain* and *Portlane*, with Syrup of Quinces and *Confectio hyacinthi*, given morning and evening; And *Laudanum*, one grain whereof was dissolved in his Julep every night. This cure at so great an Age was reckoned miraculous.

XII. A Nobleman upon drinking freely of ungratefull Wine, voided sincere bile upwards and downwards: He perfectly loathed all Meats, so that the very mention of bread and flesh turned his stomach. When I was called at length, seeing he had a great desire for some cooling Julep to quench his thirst, I gave him Spring-water corrected with *Vitriolate Syrup of Raspberries*: It was a most pleasant drink to him; but yet the fermentations that tormented the Stomach and Guts with a windy distension ceased not: An Emulsion was made of sweet Almonds, with a decoction of *Hartshorn* and *Scorzonera* root; and this pleased the palate, yet the fermentations, that were so troublesome, with their painfull distension, and the bilious Vomits and Stools thereupon were not stopt, although a strengthening Plaster were applied to the Stomach: And his restlessness toward the latter end of the day was so great, that I was forced to use *Laudanum*, two grains of which in Pills swallowed every evening gave him a quiet night, upon the return of day Vomiting of mere bile followed; yet he could bear it well: Then he drank a little strong Capon broth, and that he might quench his intolerable thirst with drink, a draught or two of his Emulsion was given him: Within an hour almost his restlessness returned with difficulty of breathing, which threatened Suffocation; for none could be more extreme: In the mean time the Patient desired a draught of simple water, I should easily have granted it him, considering he was in the flower of his age, and that his disease was choleric; but because the by-standers usually reckon this strange and destructive to the Stomach not accustomed to it, that I might satisfy both parties, I persuaded him to natural Water, but Medicinal, namely, the Wells at *Egra* in *Bohemia*: In the mean time that I might stop his longing, I commended those of *Silesia*: As soon as they came he presently quenched his thirst, and they did him good: When I visited him the next day, he told me he had rested well that night; he commended the Waters as gratefull both to his palate and Stomach; and there were some hopes that he began to recover; this hope continued, so that after dinner he could sleep a little. When eight days were over, he signified to me he was perfectly well, but that there remained some little effervescence of humours, and thirst: I sent him word he must continue the use of the Waters. After this method, but the attempt is bolder, the Inhabitants of the *Alps* in *Switzerland* are said to drink Ice in choleric Fevers, *Diarrhoeas* and *Dysenteries*. *Borellus* saith, cent. 2. observat. 27. that he cured a Woman onely by drinking fair Water, and applying *Ceratium Santalinum* to the region of the Stomach.

XIII. A Woman was taken with a Vomiting and Loosness in the Month of July about Noon, and before night she had twenty stools, with grievous pains about her Guts and Stomach, so that she was oppressed with Vomiting likewise, and voided much sharp and choleric humours: Being called in the evening, I advise my Patient to drink a glass of Vinegar and Water, till other Medicines were got ready; the operation of which was so effectual, that

Obf. 28. cent. 4. Riverio addit.

Riverius cent. 4. obs. 53.

Sigism. Grafius, obs. 99. miscell. curi. of. An. 4 & 5.

Riverius,
cent. 4. obs.
8.

that her Vomiting and Loosness were presently stopt, and no other remedies were used, because she said she was well.

Dom. Pan-
rolus, Pen-
tec. 2. obs. 11.

XIV. A certain Bricklayer, when he was but newly Married, went home every day at noon to his Wife from the Kiln, which was about 2 Miles; It so fell out about middle of Summer, while he was too vigorous in her Embraces, that he voided great plenty of blood upwards and downwards: for the heat and motion had opened the mouths of the Veins: nor would I call this disease by any other name, than a bloody *Cholera*: for besides his losing about twelve pounds of blood, there were other very bad Symptoms, namely, want of Pulse, with loss of strength, Hippocratical face, cold sweat, and he was in a dangerous condition: But by giving him four scruples of Bloudstone in Pomegranate-Wine, he was presently cured, to the great admiration of all men.

Riverius, pr.
l. 9. c. 11.

XV. When there is imminent danger from the violence of the pain, we must fly to Narcoticks, which when given prudently, are often attended with good effects: Some mix them with Purgatives, that both the pain may be asswaged, and the peccant matter carried off. *Forestus* commends this of *Elidæus*; Take of *Diaphen*, half an ounce, *Philonium Romanum* 2 Scruples, with either the Water, or decoction of *Chamæmil* make a Potion.

Septalius,
Animad.
vers. l. 7.
Sect. 23.

XVI. If there be a necessity of purging downwards, that is, when it moves imperfectly, and is cholerick, we must abstain altogether from *Manna*, and Medicines made up with Honey or Sugar; for they presently corrupt and turn to choler: But Whey will be the best remedy of all, or a Potion made with *Cassia*, which lays the heat, takes off sharpness, and purges gently: But if putrefied phlegm, or thick Choler cause it, nothing will be better than *Mel. Rosatum*, or *Solutivum* in Whey, or in an Infusion of Red Roses.

Medicines especially made use of by eminent Physicians.

Benedictus.

1. Among other things, Syrup of Mint with Pomegranate-Wine is highly commended, if the Pomegranates themselves with their inner pulp be put in the Press.

Forestus.

2. I gave one a little Cummin-seed powdered in Beer, then of the decoction of Barley 4 ounces, with Syrup of Infusion of Roses one ounce, a little Honey of Roses, strain it, and take it; then I anointed the whole part with oil of Dill and *Chamæmil*: By which means, without any other Remedy, he was cured to a Miracle.

Fr. Joel.

3. I have found no better remedy for this disease, than *Crocus Martis Paracelsi*. ¶ This also wonderfully stops a Vomiting and Loosness; Take of the Mud in the bottom of Smiths Troughs in which they quench their Iron, mix it with a little Vinegar, and apply it warm to the Stomach for a Cataplasm.

Langius.

4. Crystal is a most approved and excellent Remedy in a Vomiting and Loosness. Half a drachm of it may be given alone, or made up with other Medicines.

Mercatus.

5. Outwardly I find *Emplast. de crusta panis*, or Bread new-baked and dipt in Pomegranate juice, if it be timely applied, doth much good in a Vomiting and Loosness from a hot Cause.

Rolsinkius.

6. In strengthening the Stomach a decoction of Mint has great virtue.

Coeliaca Affectio, or Loosness.

(See Lienteria, Book 10.)

How it may be known and cured.

When too much is voided by Stool, considering the quantity that is eaten, seeing the useful part must necessarily also perish, we must consider whether the disease should be reckoned a Lientery, or a Coeliack Passion, or some other disease: for if food, a little after it is taken, be voided, and so there is a Lientery, because the stay of the food, and the necessary retention of it in the Stomach is hindered, through some fault in the Stomach; which is out of order, and presently excludes all it takes, it must either be strengthened, or freed of its troublesome Irritation, by Medicines that temper the humours, and if they abound, that may carry them off. But if the Food do make the necessary stay in the Stomach, be rightly and sufficiently fermented in it, and do make a pulsatious mass, which is voided such downwards, and if there be that sort of Coeliack passion, which I think may be called an *Idiocratic Loosness* (by reason of the defect of Secretion of the Chyle and Excrements, and that either through absence or sluggishness of the bile) that this evil may be cured, and the Loosness stopt, the said Secretion must be promoted and restored, and indeed by some bitter Aromatics, because they sharpen or augment bile, where it is either dull or too little, at least they serve instead of it, and so a disease bad enough, which kills its Patients by degrees, is cured. But if a pure pulsatious mass of fermented Aliment be not voided, but mixt and confused with the several Chyle swimming upon it, which is another sort of Coeliack Passion, because then the translocation of the Chyle into the lacteal veins, through the cloth-like crust of the Guts is hindered; whether it have its rise from phlegm stopping the Orifices of it, or it follow the consumption, and shaving, and the cicatrice stopping those passages, Medicines must be used, that may incite, absterge and purge this phlegm; for to remove the Cicatrice, and to repair the lost crust, is a thing denied to Art.

Sylvius de
Boh, Ap-
pend. ad
Prax. med.
5. Sect. 239.

Colicus dolor, or the Colick.

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The Cure of an obstinate one caused by Phlegm. XLII.

One Cure regular, another forced. XLIII.

If Phlegm be contained within the Coats, strong things must be avoided at first. XLIV.

When things that disperse Wind should be used? XLV.

Volatile Salts breed Wind and break it. XLVI.

They prepare viscid Phlegm excellently well. XLVII.

The efficacy of Spirit of Nitre in dispelling Wind. XLVIII.

Sometime cured by Salivation. XLIX.

The force of Guaiacum to conquer a rebellious one. L.

One conquered by Guaiacum Wine. LI.

Whether Spaw Waters may be drunk? LII.

Diuretics may properly be given. LIII.

Sweats and Baths of dubious event. LIV.

The use of diaphoreticks. LV.

Sometimes it is exasperated by applying hot things. LVI.

Girding the Belly close with a Girdle does no good. LVII.

Sometimes one thing causes the Pain, and another thing the Obstruction. LVIII.

A Colick from the Serum cured by Hydragogues. LIX.

A Periodical one arising from the indisposition of Muscles. LX.

One mistaken for a Pleurisy. LXI.

A Scorbutick one should have a peculiar Cure. LXII.

The Colick an effect of the Pox. LXIII.

The use of Cupping. LXIV.

To what part of the Belly they should be applied? LXV.

A Specifick, if Wind be included between the Membranes. LXVI.

Medicines.

Rolincius,
meth. l. 5.

I. ONE Purge given with Judgment in the Colick, does that at once, which ten Clysters will scarce reach, especially in the Colick pain from obstruction of the excrement above the Valve. ¶ It was observed, when a Patient had had thirty Clysters given him, without any benefit, that another Physician gave him an ounce and half of Manna with two ounces of Oil of Sweet-almonds in some fat Chicken-broth, and eased the Patient of his pain.

Riverius.

II. Often when Clysters are given, they ascend not, because the passage is stoped by the tension made with wind: And it often happens, that when several Clysters have been given, they stay behind and almost suffocate: Therefore if one or two Clysters, or it may be a third, do not come away; it is better to recall them with a very sharp Suppository, than to distend the Belly with more Clysters.

Enchir. med.
pract.

III. The more unskillfull do err, while in a Colick coming of a vitreous matter, they prescribe Clysters of weak virtue and impropportionate, as such as are made of Oil of Chamæmil, Dill and Bay, with Hiera mixt with them: for they can onely doe some good in slight Colicks, in very violent ones they cannot take away the cause. The iterated in-

jection of these Clysters is not of such moment as to overcome the hostile humour: The indication of continual repetition is not taken from the action of the violent Indicant, but from its being there: Therefore a diminute repetition can never conquer any notable violence of the Indicant, because Violence and Presence differ *totò genere*. Stronger Clysters in the Colick passion, the most violent of all others, are made of *Decoctum Carminativum*, in which a drachm and a half of *Trochisci Albandal*, and an handful of the lesser Centaury are boiled, and some Oil of sweet Almonds, which may temper the Medicine. ¶ Mistress N. was taken with the Colick, a Clyster is given, which not working, I am called; I find her crying out for the grievousness of her Pain: I prescribe a Clyster of Emollient decoction, 1 pound, *Diaphenicum* 1 ounce, *Aqua benedicta* 4 ounces, wherewith her pain altogether ceased, and the Patient voided much phlegmatick matter and wind. I my self, being tormented with such a Pain, and being not much relieved by an emollient, carminative and loosning Clyster, I was cured by the like Clyster, so that as soon as it was given me, all the pain ceased, although it came not away till two hours after. ¶ Stronger Clysters must be given, nor need we fear attraction to the part, because the force of the Injection cannot reach far, nor attract the humours, for the obstruction of the Guts. What *Galen* said of making revulsion or aversion by a contrary way, it is said concerning inflammation, and not of other Diseases of the parts that have passages sufficiently open to make evacuation. ¶ *Castor* and *Euphorbium*, if the Pain persevere and stir not from its place, are very good for it, and is a present and the last Remedy; for they that take 6 grains of *Castor* in Wine, and drink a little after it, are quickly cured; *Euphorbium* also and other things are infused in the same quantity.

Sanctorius,
meth. viii.
err.

Riverius,
obs. 12.
cent. 2.

Rondeletius.

Idem.

Idem.

Idem.

IV. Gums are dangerous, because of their toughness, and must not be put in Clysters, for sometimes they stick, and cannot be forced back, and so kill, as it appeared to us by the Death of that Noble Person, Mr. *Gaudetti*, Governour of *Montpellier*: for the Apothecary would play the Physician, and without the knowledge of *Guilbertus*, *Griffus* and *Falcon*, who looked after him, gave him *Sagapenum*, Gum *Ammoniac*, and such things, dissolved; and after he had taken his Clyster, he died all of a sudden. ¶ *Turbit*, *Coloquintida* and *Agarick*, powdered, must be tied up in a rag, and so boiled.

V. If the Ail be above the Navel, Clysters doe little good, and as all Diseases of the Intestines are worse above the Navel than below, so when Clysters are given, while the Obstructions are in the upper parts, they come but a small way at the matter, and if they be often used, they bring these Inconveniences: 1. They dull the expulsive faculty, and bring it so to pass, as never to go to stool, unless provoked; 2. The sudden impulsion of the matter of the Clysters, if they be either too hot or cold, does hurt the temperature of the Intestines. 3. No Clyster can be given, but much Wind will be given with it. Yet when the Pain is very violent, and the humours crude, because we cannot then give Pills, we must of necessity come to the use of Clysters.

Crato, conf.
169.

VI. If milder Clysters are not easily returned, and loosen not the Belly, such things must be used as irritate more; and strain, and squeeze out the humours from the mouths of the Arteries: I have often known a Clyster doe a great deal of good, in which an ounce and a half of Turpentine has been put: The reason seems to be, because the balsamick particles of the Turpentine comfort the Intestines; and, moreover, are received by the venous blood, and being circulated with it through the whole Body, provoke Urine; so that oftentimes Urine plentifully follows such a Clyster, and always smells like a Violet. Perhaps also the Particles of the Turpentine, when they are every where diffused,

Willis.

fed, do move the stagnant morbidick matter, or else incline it, being fowre or otherwise degenerate, to a better temper.

VII. But as for *Fallopium*, *lib. de medicament. purgant. cap. 28.* his telling how *Rufus* condemns Clysters in the Gripes; for this reason, because they distend the Intestines more, and that he would have Suppositories used in their stead, &c. No Practitioners need much heed this Paradox: yet this Caution of *Rufus* may be admitted in some individual persons. So when the most excellent *D. N.* was taken with a violent Colick, and I was thinking to give him a Clyster of Penny-royal, Calamint, and such things, he confessed to me he could not bear the use of Clysters, because for the most part they increased his pains, and that on the contrary they were mitigated by a Suppository: yea, he said he observed that if at any time his pains were mitigated by using Clysters, yet they easily grew as bad again, and would never allow him above two or three days truce: but if a Suppository were given him, it did not onely, like an Incantment, appease the intolerable pains in the very time of the fit; but also by the use hereof he was preserved five or six months from all Gripes. I ask him whether he had the Receipt of the Suppository which he had used, or a Copy of it? And he communicated it to me. Take of raw Honey 1 ounce, Trochisci Alhandal half a drachm, distilled Oil of Wax half a scruple, Salt Gum 2 scruples; boil the Honey to a thickness, that it may be wrought with the fingers, add the Powders and Salt, and make Suppositories. And I thought good to mention these things for the sake of young Physicians, who will now and then call to mind that passage of *Hippocrates*, when Symptoms do not presently abate. When any man does all things according to right reason, and yet it succeeds not according to reason, he must not go to another thing, if that continue, which he saw at first. But some Candidate of Medicine may reply, if he be well read in the Greeks, especially in *Hippocrates* and *Trallianus*, and he may prove from these Authours, that not onely Clysters, but Wind it self artificially put into the Bowels doth mitigate the Pain and Gripes; yea, save those that are in danger of their life. Whence he may infer either against *Rufus* or *Fallopium*, that this fear of Clysters is vain, and so the Paradox utterly falls to the ground, which maintains that, Because Clysters distend the Guts, therefore Clysters must not be used in the Gripes: And two remarkable Texts occur in *Hippocrates*, the first is in *lib. 3. de morb. sect. 5.* In which place he treats on purpose concerning the Cure of the Gripes; and many Remedies are produced against it, where among the rest he gives this advice; But if (saith he) it refuse, a great deal of Wind must be got in, by a Pipe tied to the nozle of a pair of Bellows, and blown into, and then let it distend both the Belly, and the Gut that is contracted; then, after you have drawn out the Bellows, give a Clyster. The latter Text very like the former, *lib. de affect. sect. 5.* is this; But if he refuse a Clyster, a Pipe being tied to the nozle of a pair of Bellows, and blown into, much Wind must be got in, the Gut and the Belly being distended by Wind; when the Pipe is drawn out, a Clyster must be injected immediately, which if he receive, he will go to stool; and recover. *Trallianus* also, *lib. 5. cap. 10.* is of the same opinion concerning persons sick of the Colick, that are pained with obstruction of hard excrement, and uses the same Remedies which *Hippocrates* prescribes, who there teaches us the way and manner of operation far more clearly than *Hippocrates*, by means whereof, with a Smith's Bellows, Wind may be got into the anus, and at such a time, when Antidotes taken at the mouth and Clysters could doe no great matters. Truly, to him that objects these and the like things out of *Hippocrates*, we must give an Answer from *Hippocrates* himself, who, *1. aph. 6.* saith, that for extreme Diseases, the most absolutely extreme Cure does excellently. Which words I take in this sense, that not acute onely, but the most acute and altogether mortal

Diseases must be understood by Extreme, or as *Galen* speaks, Highest, or beyond which there are no other; and among these the Iliack passion or Twisting of the Guts, a sort of that Passion, may be reckoned. See *Hofman* about this opinion, *Institut. lib. 3. cap. 47.* As if *Hippocrates* should have said, The Twisting of the Guts is a desperate and extreme Disease, you will therefore doe your Patient right, if you delay not the extreme cure, but urge it, or as *Galen*, *5. m. m. 15.* venture it. An excellent practical Admonition: Who, when the Patient must dye, thinks it a most absurd thing to begin with gentle means. Therefore far be it from us to charge *Hippocrates* with Ignorance, as if he knew not either those Inconveniences that attend both a flatulent or pneumatick Clyster, and the thrusting of a Smith's Bellows into the anus, or those, that *Fallopium* and *Rufus* fear will be brought on Patients by all Clysters: But, on the contrary, it must be asserted, that *Hippocrates* well knew all these things, but advised, that of two Evils, the Patient being in danger of his Life, the less should be chosen, and that in this case a doubtful Remedy was better than none at all: As a pneumatick Clyster, or a Blast of the Bellows were indeed hurtfull to the Intestines, inasmuch (as *Rufus* observes) as thereby the Guts were more distended, prickt and racked; but this was but for a moment, and so as the Distention of the Intestines quickened the torpid Belly, and parted the guts from the excrements that stuck close to them, which Nature was afterward able to void.

VIII. When the Disease invades one, these three things usually concur. 1. Obstruction of the Belly, through plenty of dry excrement. 2. Driness of the Guts, with which the obstruction and heat of the Kidneys, which maintains the Driness, often coincide: Sometimes too much Purging leaves the passage dry, especially when thin matter is purged, and the thick left. 3. Afflux of humours from the Veins increases Wind: In this state of affairs, when the Colon being obstructed above by the humours, below by the excrements, Wind can neither get out openly, nor for its thickness transpire by occult ways, that miserable Distention of the Intestines ariseth, especially if the Guts be also dry: Here some presently hasten to discuss Wind, they apply Fomentations, give Discutients, &c. which indeed in a slight Colick doe what they ought; but in a violent one they doe a great deal of harm, by dissolving Phlegm into Wind. These things have their use, but it is necessary first of all, that the lower passages be opened, and the Driness of the Intestines amended. For this purpose lenient, and mollient Clysters are very good, and if there be viscid matter, inciding also and absterging ones are proper; upon which we must insist, untill the Obstruction arisen from the Retention of excrement be taken away. And why Oils should not be received in Clysters, I see no reason, for they make slippery and mollifie the Guts. I fear Driness much more, which, if Oils are not used, remains. A certain woman, when she was ready to dye of colick Pains, was cured onely by mollifying the Intestines. I put the Sewet of a Wether taken out hot in a Kettle, and before I could get it ready I applied a Cupping-glass, endeavouring thereby to ease her pain, the Intestines being mollified, she voided much vitreous phlegm and bilious humours, and she recovered, contrary to all expectation. Hence it appears of what moment the mollifying of the Intestines is, in the Colick; for which purpose Oils are given: *Galen*, when his Guts were pricked as with a Piercer, upon taking a Clyster of Oil of Rue, voided a quantity of vitreous Phlegm, and recovered.

IX. *Bartholinus*, *cent. 4. epist. 92.* saith, the most present help must be placed in Clysters of Tobacco Smoaks. What they are able to doe, *Mr. Pacinus*, that most able Apothecary, found at *Geneva* not many years since; who being grievously sick of the Colick

S. Pauli,
Quadrupart.
Botan. p. 461.

G. Hofman-
nus apud
Scotiaum,
conf. 273.

Colick from the *Colon's* being obstructed with excrements, when he could not have a stool by any means, no not by swallowing of Bullets, one of Lead, another of Gold, nor by three ounces of Quicksilver it self, was cured by having Tobacco Smoak blown into his anus by a common Tobacco-pipe, which gave him a large stool, and by other convenient Remedies.

X. They deserve reprehension, who in a Colick caused by hard excrements, do presently use sharp Clysters, and hot Fomentations and Ointments, all which things do but stop up and dry the more; for *Galen* teaches that we must first go to Emollients, and then to sharp Evacuations. I, happening upon a Patient whose Belly was stopp'd up with hard excrement, and was in great Pain, gave him first ten ounces of Oil of Sweet-almonds, and the next day ordered him a Clyster of Oil and *Hiera*. Whereupon the excrements dissolved by the Oil, were brought away by virtue of the *Hiera*. In such a Colick I have eased many of grievous Pain, giving them in twenty four hours time thirty ounces of Oil of Sweet-almonds, ten in the morning, other ten in the evening without drink, and ten the next morning. This quantity of Oil certainly comes to the place grieved, and greases all the Guts: I give no other food in the mean time, because Oil nourisheth sufficiently. A less quantity is insufficient.

Sanctorius.
Meth. l. 3.
c. 9.

XI. A Noble woman was taken with a grievous pain of the Colick, and, nothing else being at hand, I ordered her a Clyster of *Hippocras* wine, and she was presently cured. A Farmer, that had bought Wine spiced to make merry withall, was so cured. Now these Wines have Sugar or Honey for deterioration: And *Hippocras* has Cinnamon, Pepper, Ginger, Grains of Paradise in it; therefore no wonder, if People be cured by such Remedies. I cured another Country-fellow with Broth, Garlick beaten in a Mortar and Oil: for whatever things incide and attenuate, do discuss, and therefore cure; as a Decoction of *Erysimum*, wherewith I have cured several, which also is an effectual Remedy in Wine. In these Clysters Wine should never be omitted, because it concocts the matter, eases pain by discussing Wind, and by refreshing a little: But then it must be old and of thin parts.

Rondeletius.

XII. Sometimes strong Purges, I think, are necessary: For these two things are commonly joined together, Pain and Costiveness, so that neither strong Clysters nor Lenitives, although taken in great plenty, can give a stool: Therefore what must be done then? Must we tarry till the Guts be twisted? If in the Twisting of the Guts, in which the strength is lower, no Man refuses a Purge, why then should not Purges be prescribed, that the Patients may be preserved from it? They that think we must not purge, as *Fuchsius*, say that *Galen* wrote, how the humours must never be drawn to the part affected, but this is of no moment, because there is a way in the part by which the attracted humours may be voided. *Fuchsius* adds, that neither *Paulus* nor *Aetius* used any other Medicines than gentle ones, and that the Moderns have introduced the use of Purges: But he is deceived, because perchance he onely read the Judgment of *Paulus* and *Aetius* concerning hot matter, and not cold: For *Paulus*, speaking of cold matter, proposes Pills made of *Euphorbium* and Scammony: *Aetius* in the same case commends *Hiera Archigenis*: Whereas he subjoins, this custome was received from Practical Physicians, he shews that either he never read the *Arabians*, or but carelessly, who use *Diaphenicon*, *Elect. Ind. Hieræ magna*, strong Pills. And I must ingenuously confess I have cured several in one day with this Medicine; Take of *Diaphenicon* half an ounce, Species *Hieræ* 3 drachms. Mix them; Make a Bolus.

Saxonia.

XIII. If Catharticks cannot be kept for continual Vomiting; apply a large Cupping-glass to the Navel, or a little below, and there let it stick for an hour,

if it can be done; or let the Cathartick be taken in the Bath, for by this means it will stay.

Enchir. med.
pract.

XIV. *Avicenna*, *fen. 1. doct. 4. c. 1.* says, that the Colick sometimes comes by reason the passage of the bile to the Guts is stopp'd; therefore the expulsive faculty of the Intestines is not irritated, and by consequence the excrements are retained, and by continuance hardened: And because the *Colon* is the greatest and weakest of all the Guts, it gathers a great quantity of excrements, and after it is stuff'd and full loaden, intense pain is bred, which is not removed with purging Medicines, because they draw new matter, whereupon there is a greater load of matter, and therefore greater pain: Neither is it removed by *Hiera*, or other drying things, because so the excrements are more dried and hardened; Nor is it removed by Clysters, because the *Colon* is shut: But we must then rely wholly upon Oil of Sweet-almonds; about half a pound of it may be taken at the mouth.

Sanctorius.
Meth. l. 3.
c. 9.

XV. Too violent Catharticks must be avoided; as Hellebore and Antimony. Nor yet is *Cassa*, though it purge gently, proper, because it is windy. *¶* Manna is windy, I do not approve of it in the Colick. Do not give Manna, Rheubarb or Senna, especially in Potions, except the Intestines be first well strengthened. *¶* If it be from Phlegm, it must first be purged, that Flatulencies, which usually accompany it, may be digested: Among Purgatives, *Agarick*, *Mechoacan*, or *Elect. Diacarth.* may be given in a Decoction, with Anise, Fenil, or *Daucus*-seed. We must avoid Rheubarb and Myrobalans, also Senna and *Cassa*; the first, because they bind; the latter, because they breed Wind.

Enchir. med.
pract.

Crato, Ep.
141.

Hartman.
Prax. c. 146
sect. 11.

XVI. What Purgatives are convenient for a bilious Colick? When the Pain is a little mitigated, an Infusion of Rheubarb in Cichory-water may be given with Syrup of Roses, and must be frequently repeated, till the load of humours be evacuated. If such a gentle Purge be not sufficient to root out the Disease, we must fly to *Mercurius Dulcis*, which given several times with diagrydiate Purges, performs the Cure. They that suspect *Diagrydium*, may take *Mercurius Dulcis* alone made into Pills with some Conserve of Roses, drinking upon it an Infusion of Senna and Rheubarb, with Manna and Syrup of Roses.

Riverius.

XVII. *Eletharium Diaphanicon* is excellent for the Colick; for it purges tough and thick Phlegm: but it must be made of ripe Dates, which have attraction enough to correct the Scammony: for from *Galen*, *l. ad Glauconem*, Wormwood, that is hot and dry, is not good in phlegmatick Diseases, because of binding: For the same reason they must be steeped in Wine rather than Vinegar.

Rondeletius.

XVIII. If we have a mind to mix Narcoticks with Purgatives, by this method of Cure we gain three things; we purge Phlegm it self, we discuss Wind, and we ease Pain; than which no more proper or successfull way of Cure can be thought on in these grievous Pains.

Ficinus, Phy.
Ingr. c. 19.

XIX. Sometimes it happens that Phlegm gathered in the *Colon*, causes a Swelling, which being turgid on the out side, leads the Physicians into an error, and eludes the Cure: for when they find the hardness of the Swelling, they presently run to Emollients, and insist upon them, when the Cure should be directed to the taking away of the cause, i. e. the carrying off the Phlegm from the Guts. And the thing it self speaks; for when part of the Phlegm is voided, the Swelling falls and grows less. See *Fernelius* his History of *Charles* the Fifth his Embassador.

G. Hofmannus, conf. 6.

XX. A Vomit, if it be convenient, must never be omitted in this case, by which the Ejectories of the Bowels being emptied, they may more freely receive the recrements of the blood and nervous liquor, which would otherwise increase the morbid matter. Moreover the *Plexus nervi*, and all the parts would be so shaken, as nothing that can fo-

Willis.

ment the Disease, would be suffered to stagnate or gather there. ¶ The Reverend N. was subject to the most violent Colick, being convulsed in his hands, when he had been often purged by things taken at the mouth and by Clysters, and nevertheless his Pain returned, with a violent Compression of the Abdomen, I thence conjectured that store of gross humours was lodged in the Hypochondria, which must cause such straitness, and his relapse; I betook me to a Vomit, I gave him of *Diasarum Fernelii* three drachms, with four ounces of *Hydromel*, to make revulsion of the matter by Vomit; within less than an hours time he began to vomit, not continually, but by turns: Great store of phlegmatick humours was cast up, more than a Basin full; at length, the sink being cleansed, the Vomit ceased, nor did his Pain return any more; the Patient, who before was lean, now growing fat. Many Monks every where in their Cells, labouring of a compressive Colick, their Bellies being drawn-inwards with violence, which at length ends in Convulsions and Epilepsies, go down to their grave, who if they had taken Vomits might have been kept alive: because these gross and tough humours, being close fastned, can no other way be rooted out more conveniently. But, because Vomits frighten the By-standers, and make the Physicians also more timorous, they are therefore the seldomer used.

Aug. Thane-
rus, Obs. 3.
l. 6.

XXI. When we see a Clyster will doe little good, we must go to Potions and outward Applications. A Potion may be made, 1. An easie one of *Diacyminum*, or *Electuarium de bacis lauri* with strong Wine hot, or strong Wine and Honey. 2. Of Nutmeg powdered and *Cretian* Wine hot. 3. Of Cassia 1 drachm, with Wine also. 4. A Turpentine Potion. 5. Salt and sulphureous Waters. 6. Wolf's Dung which hangs on Thorns. 7. Larks in White-broth. 8. Hart's-horn burnt in a Pot, reduced to powder, and drunk in a drachm weight. 9. Broth of an old Cock with *Caribannum*, Polypodies, Turbith, Hyssop, Seed of *Daucus*, Dill and *Ammi*, *Sal Gennm.* and Spices boiled in it, giving a Clyster now and then of the same Decoction. When the matter is concocted and ready, I have used *Diaphenicon* and *Diacatholicon* with good success, and sometimes Cock-broth, and other Remedies which do not heat much.

Leon. Jac-
chinus.

XXII. Give Syrups, without any Liqueur, *Ozymel simplex* or *compositum*, mixing some *Scylliticum*, Syrup of Betony and Mint with it: for if you mix any hot Liqueurs with it, they will encrease Wind.

Saxonia.

XXIII. Seeing the antecedent Cause is either thick and phlegmatick humours lodging within the Membranes of the Colon; or some flatulent matter; or an Inflammation of the Colon, or a sharp and biting Juice, which causes sometimes are complicated, if the Disease be of any continuance, when frequently, together with the thickness of the matter, a flatulent acrimony is also joined with Inflammation; wherefore, according to the Hermeticks, the colical disposition is produced from a tartarous Mucilage, mixt with styptic and sower Spirits: Therefore it is asserted, when all things convenient are premised, that Spirit of Salt is very good, as well because by its attenuating and resolving faculty it corrects the peccant humours: as because by its discent faculty it digests the flatulent matter: Besides, it alters the putrefying matter, and preserves the humours from Putrefaction: Yea, by its aperient faculty it disposes the morbid cause, that nature may sooner rid her self of it: And in as much as it depresses or fixes hot and sulphureous Exhalations, so far it is a very good Anodyne. Nor need we fear, that by its heat it will too much melt and dissolve the humours, which *Galen*, 2. *Metb.* 8. bids us have a care of; or that by its penetrative faculty it should enrage the humours more; because it is evident, in that being give to hydro-pick persons, it quenches thirst, and does not cause it; and it rather consumes and allwages the raging humours, than irritates them.

Horst-
Dec. 6.
l. 1.

XXIV. Be not inconsiderately of their opinion, that Cure every Colick with hot things; Look attentively to the Cause of the Disease before you. I saw yellow Choler swimming so plentifully on the Colon of a Woman, that one might have taken it thence with a Spoon, which affluence of Bile in this place seeing Anatomists do frequently observe, it is very likely that it sweats through the coats of the Gall-bladder by little and little, being nearer to this Gut than others. Wherefore they doe very ill, who by overmuch study do violently press the Liver, because this prone incurvation of the bended body squeezes out the Bile; which sometimes as it pricks and vellicates the out Skin, so now and then it insinuates it self between the coats of the Colon, so miserably racking the Patient thus beset, that he had rather dye a thousand deaths, than fall into such misery.

Tulpius,
obs. l. 2. c. 37.

XXV. The chief signs of a Colick arising from Phlegm and Wind are taken from the excrements, and for the ease and cure of it, things that purge Phlegm and break Wind, all hot things with tenuity of parts are used. Yet, that we should have more respect to the temperature of the Body and the Age, than to these Causes, i. e. Phlegm and Wind, this fresh example doth shew; About two years since, that Noble Person, Mr. de Momolin, Treasurer to the most Serene Prince de Longeville, in the Province of *Neuschassel*, scragged, as it seems, of a cold and dry temper, endowed in his youth with a senile prudence, about thirty five years old, was frequently taken with the Colick, which gave him but little respite, so that he was scarce two days free from it. He advised with several Physicians, whose main care was, that the crude, cold and moist humour might be altered, concocted and excluded, Wind dissipated, the cold intemperature of the Stomach and Guts might be brought to a hotter, and their tone might be restored them. This Noble Person diligently observed the Diet and Medicines, nor failed in any thing, the Pain nevertheless raging, and nothing abated. At that time he was sent Embassadour by the most Serene Prince to his Subjects, with the Noble *Akasia* for his Companion, who is Grandchild to *Akasia* the famous Physician of *Paris*, well known for his several Commentaries upon some Books of *Galen*: He, considering the constitution of the Noble Treasurer's body, judged he must go another and contrary course; he said the Disease must be overcome not by heating and drying things, but by temperate and moistning, and that the generation of Phlegm and Wind, was the product as well of a hot and dry intemperature of the Guts, as of a Cold: If he had a mind to be free of his troublesome and frequent Pain, he must bid farewell to the Remedies he had hitherto used, and must now ply temperate onely and allwaging things: That for this purpose the continual use of Chicken or Veal-broth without Salt, was very good, that he should either wholly abstain from Wine, or drink it with much Water. The Noble Treasurer had scarce observed it three days, but he was free from all pain, and enjoyed his perfect health.

XXVI. An Apothecary forty years old told me he was several years troubled with the Colick, and could find no other Remedy but Drinking of Water, and as long as he persevered in it, he continued well, but as often as he fell to the use of Wine again, within two days he was taken with the same disease. In my judgment the Colick was not raised by simple bile, but for the greater part by a Melancholick Humour mixt with a bilious one, seeing the said Apothecary had the melancholick temper predominant in him: And seeing Melancholy is continually poured out of the Spleen into the Stomach, which by its acidity infects the Wine as soon as it is drunk, the Wine presently turns sower upon the Stomach, and encreases the cause of the disease. But if a bilious humour were the cause of the Dis-
ease,

ease, it might indeed be corrected by drinking water; but the use of Wine would not so suddenly bring the disease; because Wine does not so quickly produce the Qualities of Bile, as of Melancholy, in as much as wine easily grows sower, and not bitter: And that which makes me the more believe it is, that when the said Apothecary was taken with a fit of the Colick, he cast up sower stuff by vomit, and not bitter.

XXVII. A certain Physician, as *Paulus*, l. 3. c. 42. and *Avicenna* relate, cured bastard Colicks, which formerly ended in the falling-sickness and Palsie, several times with Diet potentially and actually cold, although irrationally. Which nevertheless *Oethaus* in *Observat.* testifies, did happily succeed the plentiful use of raw Plumbs and Grapes. ¶ And it is convenient sometimes by the repeated drinking of warm water, sometimes, when the body is prepared, of cold water, to keep in the Choler that flies upward: Or some water, in which new vine Branches, pregnant with their native juice, chopt indifferently small, is boiled in *Balneo Maris*. ¶ *Galen*, 12 *Metb.* 7. cured a certain Patient of the Colick in Summer time, when he was very thirsty, onely by drinking cold water, to whom *Ætius* also subscribes. After whose example, when I practised Physick at *Venice*, I often gave cold water in the Colick with good success. ¶ Some according to *Julius Alexandrinus* his advice, dislike not of applying cold water to the Belly with double cloths, in great extremity: For it is manifest that by the use of it the pain presently abates: which nevertheless, except timely hindered, usually turns to the Palsie, the matter being violently repelled, and driven to the origination of the Nerves. ¶ *Taranta* and *Crato*, famous men, account cold water plentifully poured upon the belly as a secret: which yet they had from *Hippocrates*, 5 *aph.* 25. for cold water being poured largely on, a numbness being caused, takes away the pain. ¶ But this may be done with more safety, when the body is loose, and when the excrements are loosened and evacuated.

XXVIII. Seeing all the Phænomena of a bilious Colick do manifestly declare, that this disease comes either from some sharp humour, or vapour, discharged from the mass of blood upon the Guts, The primary curative Indication to me is this, *scil.* that the said humour, as well the Antecedent in the veins, as the Continent shut up in the Bowels, may be evacuated: The second is, that by the use of Anodynes the violence of the humours tending thither may be stoppt, and the most sharp humour may be qualified: Therefore I order a good quantity of blood to be taken away (if namely it have not been done before) and an Anodyne to be given within three or four hours. The next day I prescribe some gentle purge, to be repeated the next day but one, sometimes for three turns, as I find the reliques of the humours more or less.

XXIX. But it must be observed, that if this disease owe its original either to horary fruits eaten in too great a quantity, or to any other meat hard of concoction, from whence bad and corrupt juices were first of all transmitted to the blood, and from it afterwards to the Bowels; The case I say, standing thus, the Stomach must first of all be well washed by drinking a great quantity of Posset-drink, and vomiting it up again, which done, an Anodyne must be given: and the next day a vein must first be opened, and for the rest, we must proceed in the same order, as we have already shewn.

XXX. But seeing the violence of the pain, and inclinations to vomit, whereby the Intestines are in a manner inclined to an inverted motion, do resist the Operation of Catharticks, their strength must be increased, nor must a Lion be set upon a Cock: for you will but in vain give a gentle purge, unless perhaps the Patient be very easie to work upon, which must diligently be enquired: for when such a Medi-

cine is not able to make its way through the Canal of the Guts, the Patient is rather hurt by it, while the vomit and pain are increased by its ineffectual motion. A gentle purging Potion of infusion of Tamarinds, Senna and Rheubarb, in which Manna and Syrup of Roses may be dissolved, is to be preferred before any other Purge, because it gives the humours the less disturbance: Yet since either through the Patient's averseness to a Medicine in a liquid form, or his inclination to vomit, he cannot retain it in his Stomach; Pills must of necessity be made use of, among which *Cochia* ever pleased me above the rest, because they are sure to go the same way they begin, both in this case, and in most others.

XXXI. But when either the weakness of the Stomach, or inclination to vomit is such, that Pills cannot be kept, there I first of all order an Anodyne, and within a few hours after a purge, yet allowing so much time, as that the Purge may be given at such a distance, that it may not be overcome and perish by it, and may make a convenient stay in the Stomach, which may suffice till the purge begin to work, and that when one ceases, the other may begin its operation: Although a Purge, if it can be so, should be given by right a good while after the Anodyne, because twelve hours after the Anodyne is taken, it will scarce work, and not without much difficulty.

XXXII. But seeing here, as in most other diseases, in which Narcoticks are indicated, a purge always increases the pain (at least when the working is over, for while it works the Patient sometimes finds himself more at ease,) therefore it is customary with me, to give an Anodyne, as soon as the Energy of the Purge is over. Which I also order to be taken every day morning and evening between his purgings, that I may be sure to lay the Pain till he have purged sufficiently.

XXXIII. When purging is done withall, I endeavour (which is the onely thing now remaining to be done) to bridle the violence of the Humours by giving an Anodyne constantly morning and evening, which sometimes must be repeated oftner: Nor has it ever been my fortune to be able to lay violent pains, except by a larger and reiterated dose: For what is sufficient to subdue another evil is overcome by this, the violence of the pain breaking the virtue of the remedy. And when pain of this nature is urgent, Narcoticks may very safely be repeated, but not when it is over; wherefore following the direction of Pain, I repeat the Narcotick, till it either quite cease, or be very much abated: Interposing nevertheless so much time, as that it may be apparent to me, what I may expect from the precedent dose, before I give another: But for the most part, unless when the pain is extraordinary violent, a Paregorick given morning and evening will be sufficient. The Anodyne I use most is *Laudanum liquidum*, of which this is a description. Take of *Canary Wine* 1 pound, *Opium* 2 ounces, *Saffron powdered* 1 ounce, *Cinnamon* and *Cloves* each 1 drachm; Let them be infused in *Balneo Mariæ* for two or three days, till the *Liquor* acquire a due consistency; sixteen drops of it may be dissolved in some distilled cordial Water, or the dose may be increased, according to the violence of the Pain.

XXXIV. This most simple method, whereby the peccant humour is evacuated by Bloudletting and Purging, and afterwards Rest is procured by means of Narcoticks, always succeeded most happily with me, above all others, that I have hitherto known. For carminative Clysters, that are given on purpose to get out the sharp humours, onely make the matter worse, and when a tumult is raised in the humours, make the disease the longer. And here I would have it taken notice of, that although I said Bloudletting and Purging must necessarily go before this appeasing Method; sometimes nevertheless, the case so requiring it, omitting both these, we must

Riverius,
Cent. 4.
Obs. 49.

Mart. Mar-
tius de morb.
ment.
l. 14.

Mercatus.

Portis, Obs.
93. Cent. 2.

Martini su-
pra.

Portis, Cent.
2. Conf. 94.

Id. Conf. 95.

Sydenham,
Observat. in
morb. acut.
295.

Idem.

Idem, p. 296.

Idem, p. 297.

Idem.

Idem.

must begin the course with Paregoricks, for example; when for some former sickness large evacuations have been made not long before the coming of the Colick, (for frequently by reason of the weakness of the bowels, especially if there be an accession of a higher degree of heat from Wine, or any other Spirituous Liquor drunk immediately, they that are lately recovered of another Disease, fall into this,) in this case, I say, I think it not onely unnecessary, but hurtfull also, by giving more purges to raise new tumults, and again to disturb all anew. To say nothing, how in this disease the Patient for the most part, before he sends for a Physician, washes his Guts sufficiently by the repeated use of Clysters, so that partly for this reason, partly for the long continuance of the disease, Narcoticks in a manner onely seem proper to be used.

Idem.

XXXV. And because this pain is more naturally apt to relapse than any other, all opportunity of its return must be taken away, by giving an Anodyne twice a day for several days together. But if when the Narcotick is left off the pain now and then return, (as sometimes it does) nothing yet could be invented by me, that so certainly conducted to cure the Patient, as riding on Horseback or in a Coach, the Anodyne in the mean time being given morning and evening. For by such exercise the matter causing the disease is drawn into the Habit of the Body, the blood being divided into its minute parts by stirring, is as it were purified anew, and at length the Intestines themselves, by stirring up of the innate heat, are not a little strengthened and cherished. Nor am I ashamed to confess, that I have more than once perfectly cured this disease by such exercise, when I have not been able to do it any other way. But neither must this be tried, till after sufficient evacuation, nor must it be left off till several days afterwards. And, to speak the very truth, I have observed this kind of Exercise doe much good not in this case onely, but in all Chronical diseases, if a man constantly persisted in it. For if we reckon with our selves, how the lower Belly, wherein the Organs of Secretion are placed, is especially shaken by this exercise, and that they are shaken with some thousand Trottings in one day, we may easily think that by the help of the said exercise, they can discharge any recrementitious juice, that is settled there, and (which is yet of more moment) that by such strong excitation of the innate Heat they are strengthened, so as to perform the office of depurating the blood aright, which Nature has committed to them.

Idem.

XXXVI. It is manifest from Observation, that when this Disease being unskillfully handled hath tired one out for a long time, so that the bowels languish, the Patient is worn to skin and bone, and ready to dye of faintness; In this case, I say, the more liberal use of *Aqua Epidemica*, or *Mirabilis*, or any such like which in his health he liked best, at this time helped him beyond expectation: For by help of this the few adust reliques of the innate heat and Spirits were excited, and the preternatural ferment, sticking to the bowels, and now and then administering fewel to new Paroxysms, was extinguished by the more spirituous Liquors.

Idem.

XXXVII. Moreover as in the cure of the Disease, so also when it is cured, a thin Diet must yet for some time be continued: For seeing this disease affects a Relapse above all others, and that it chules to its self the chief Instruments of Concoction (I mean the Bowels now weakened by it) the very least error of this kind will presently bring considerable damage. Wherefore as well in this as in all other affections of the Bowels, Meats hard of Concoction must be avoided more than a Toad, and what light meats are allowed, must be taken onely in such a quantity as may keep Life and Soul together.

Idem.

XXXVIII. When Anodynes doe no good, and the pain is exceeding violent, we must come to Narcoticks, which are very commodiously used in a biting and a sharp humour, not because they cool, as is commonly believed, but because they have the faculty to mitigate the acrimony of the humour, to thicken it, and to keep in its biting and motion. But in cold, thick and tough humours Opiates are not so proper, seeing they make the morbidick cause worse, and more difficult to cure. And though they that have the Colick from cold humours, do at first perceive some benefit by them, yet afterwards the pains become greater, the humour it self being made thicker, and more unfit for motion, and so it sticks more closely to the Coats of the Intestines.

Sennertus.

XXXIX. Yet you must take this caution about the use of Narcoticks, that when there is occasion for them, they be used while there is yet strength; for if they be used when strength is wasted, and the Patient is near death, they will not onely doe no good, but also hasten the Patient's end, and take away Life and Sense together. Then let such things be given in a Clyster in some convenient decoction, and when the Clyster is given, let the Patient lie on his pained side.

Idem.

XL. But if the violence of the pain rise so high, that leaving other intentions, we must have an eye upon it, it will be proper to use Narcoticks, which by stupefying may correct the evil, both taken inwards, and outwardly applied: Yet with due Provision always, as to their quantity, manner of using, time, and the subject to which they must be administered. What are given into the Body, are mixt with Purges, Potions, Clysters; But it is convenient, they have all of them these requisites. 1. That by hastening to some principal Part, they weaken not its faculty. 2. That they be well corrected. 3. That they strengthen the Spirits, and be mixt with strengtheners of all the vital Faculties, hepatick and stomachick: For there must be no other end in these things than refreshing the strength, to wit, that while the Pain ceases, the Patients may recollect their strength, be a match for the Disease, and be able to subsist the time of cure: Therefore it is better to give them twice or thrice in a small quantity, than in so large a dose as may afterwards doe harm. But when the pain is laid, and watching hushed, they must presently be removed, lest they serve to promote the morbidick cause.

Martini de Morbis mentis.

XLI. We must have a special care in the mean time that Opiates be not given, unless the body be first purged by proper evacuations, and they must be taken some hours before Meal, upon an empty Stomach, in extreme pain, and when other Anodynes will doe no good.

Ficinus, Phys. Jogr. c. 19.

XLII. The cure must be begun with Clysters; Take of the Decoction of Mallows, Mercury, Pellitory of the Wall, Chamemil flowers, Betes, 1 pound, Honey of Roses solutive, Oil of Chamemil, each 3 ounces, Yolks of Eggs No. ij. mix them without salt. If evacuation do not follow, let another be repeated of the Oils alone, which the Patient must keep all night. But if no evacuation of Excrements follow, some Lenient should be given: But because I have seen many Lenitives given often to no purpose. I propose as a very safe Medicine, and often tried by me, 5 ounces of fat Manna dissolved in Broth, altered with Cinnamon: for by its fatness, moistness, and subtilty of parts, it makes lax, penetrates, and by softning expells the Excrements; which if it give not a stool, Oil of sweet Almonds may be given from ounces to a whole pound. When the Gut is rid of the Excrements, tough phlegm must be prepared with *Mel rosar. simpl.* and *Oxymel*, adding a little *Aqua vita*, Aniseed, Juniper or Cinnamon water. And being prepared, it must be evacuated with 2 drachms of *Hiera picra Galeni*, made up with Lenitive Eleatuary. But if in the mean time the belly become bound again, such a Medicine may be given; Take of Elect. Diaphenic.

Portia, 2a. c. 11.

Idem, 1a.

Sennertus.

Idem.

Sennertus de Morbis mentis, 1. c. 14. Soli, 1a.

Idem, 1a.

phœnic. half an ounce, Spec. Hier. simpl. 2 drachms, Philon. Roman. half a drachm; mix them, make a Bolus. For when the pain is eased, the Intestines are more easily loosened, and the Excrements voided. But if the Disease continue, preparation must be repeated in this manner: Take of the Decoction of Speedwell, commended by Crato, of green Mint, by Ætius, root of Masterwort, 5 ounces, Oil of Zedoary 5 drops; make a Syrup of them. For Zedoary is most powerfull against vitreous Phlegm. Then purging must be repeated with stronger things, whatever *Massaria* and *Septalius* say; for we may use them when the pain is a little laid, the matter diminished, and sufficiently prepared. Wherefore *Essentia Trochisc.* *Albandal*, or *Spiritus vite aureus Rulandi* may be given; which if they be not at hand, Take of *Elect.* *Diaphoen.* 2 drachms, *Pil.* *Aloephang.* 1 drachm, *Trochisc.* *Albandal*, *Castor* each 3 grains; make them up.

Fortis, conf.
92. cent. 2.

XLIII. If perhaps after all is done, the Disease should return, the Cure may be twofold, Forced, to wit, and Regular; The forced is proper for most cruel pains, and must be performed by Anodynes and Narcoticks; wherefore *Galen* 12. met. 1. says, Though I above all men do abhor the use of high Narcoticks, yet I give them in a very violent Colick. Which he repeats 3 per loca 1. When pain is urgent, I of necessity use stupefiers. To which nevertheless we must not come, till after we have used other Medicines in vain: For they ease pain, but do not cure Diseases, 2. ad *Glauc.* 8. Hence *Ætius* considers that stupefiers are good for hot humours, but are bad for cold, because they thicken them, and cool very much. So *Trallianus* and *Paulus* write, that by stupefiers the cold humour becomes thicker, and more unfit for motion, the coats of the Intestines are made thicker, and at length the disposition being increased, the Disease is prolonged. Wherefore we must use Anodynes, and use Narcoticks as little as may be.

Idem, ibid.

XLIV. Most grievous pain is frequently raised by Phlegm and thick and tough humours, not contained in the cavity of the Intestines, but within the Coats of the Colon. *Galen* 12. in m. 7. In such a Colick, having purged first, bids us use attenuaters of Phlegm, dissolvers, and discutients, (yet not very hot things, lest the matter being suddenly dissolved, wind be multiplied,) and preparatives of the matter for excretion, and lastly evacuaters. Strong Clysters and repeated in the beginning doe more hurt than good, the matter being stirred indeed, but by reason of its unfitness not evacuated, and nature spoiled. Gentle things must be given also at the mouth. *Avicenna* bids us abstain from Agarick, for fear of vomiting.

Sennertus.

XLV. These cold and gross juices contained within the coats of the Intestines, must be incised and concocted, and indeed with such hot Medicines as do not discuss more than they digest, but have a faculty to discuss wind, among which *Galen* reckons Garlick. For although some think Garlick breeds wind, yet *Galen* says right, 12. m. m. 8. that of all edibles Garlick discusses wind most: for it manifestly has an exceeding heat, and such as breeds not a phlegmatick humour, but manifestly resists it.

Idem.

XLVI. Volatile Salts, but oily, do both powerfully and gently discuss wind above many other things; In the use of which I have observed something worth notice, namely, that wind is produced by them, as often as viscid phlegm sticks in the Stomach or Guts, but then the wind is dispersed and broken by their virtue, or otherwise disappears. Whence I argue, that Wind arising from bad humours in the body, be they more or less viscid, may gradually be discussed and abolished by the said Salts, which experience it self also confirms.

Sylveus de le
Boz, Frank.
l. 1. c. 14.
Sect. 59.

XLVII. This is remarkable also in the use of them, That viscid Phlegm is by degrees incised and amended by them. So that whatever either wind it self, or the matter of it require for cure, these oily Salts are able to doe it all.

Idem, ibid.

XLVIII. Most Aromatick things, out of which Oils may be distilled, seeds especially, discuss wind. The Spirit of Nitre bears away the Bell from all the rest, being every way usefull, while it corrects both Phlegm and Bile, and hinders wind from breeding; and disperses it when bred. ¶ It discusses wind, at least it forces it to fall, and hinders the new rise of it.

Id. c. 7.
Sect. 27.
Id. c. 4.
Sect. 6.

XLIX. In a tedious Colick, when all other Medicines could doe little or no good, I have known this Medicine, given once or twice, raise a salivation, to the great relief of the Patient. For if at any time the morbidick matter gathered and firmly fixed in the nervous folds, or other places about the Abdomen, cannot be moved by other Medicines, the Mercurial Particles diffusing themselves every way, easily dissolve and divide it into minute parts, and dispell them diversly hither and thither, and at length altogether disperse them: Wherefore in a long and pertinacious Colick they may sometimes successively be given for a gentle Salivation.

Willis.

L. When the Patient's Colick could not be eased by use of Medicines, and he could not move himself but with great difficulty, I came to this last resolution, to give him a decoction of *Guaiacum* wood, and its bark, in which a little *Fenel* onely was boiled: because if other Medicines were mixt with it, they would rather weaken its virtue, than add to it. And then if the Fever should cease, as I hoped it would, that a third part of wine should be added to the decoction, boiling and preparing it after such a manner, as seemed most convenient for the health of the Patient, giving him of it both morning and evening for a Julep, and for his Drink, although I had resolved not to put him upon so slender a diet, as if he had not been afflicted with so tedious a Disease, although he had formerly used a fuller diet than was convenient; by which sort of remedy he was perfectly cured of his Disease. Who unless indeed he had recovered of his Disease quickly after taking it, truly I had added a greater measure of the Bark, seeing it is more efficacious than the rind of Rhadish, Citron, Hellebore, Capers, and several other things. Nor would I have passed to other things, but have waited a few days, seeing the nature of this Medicine is such, that it exercises its strength along time after it is taken.

Alcyon's
Mandella.

LI. A Bath-keeper of Vienna after he had been wrackt 3 quarters of a year with a most grievous Colick, and had used many things amiss, and the evil seemed to be exasperated by drinking Spaw-waters, yea, and his young Wife was but lately dead of the same Disease, fearing the same fate, sent for me. He began to be convulse in his whole Body, so that I guessed the matter translated to the nervous kind about to cause a Palsie, created us this mischief. When his Convulsions were stopt by Medicines, I gave him *Guaiacum* Wine, according to *Amatus* his Precept, *Cent. curat.* 32. to cause him to sweate for five days, and he was perfectly recovered. Without doubt it was a Colick from phlegmatick humours the Seminaries of wind, got into the Guts, which being dissolved by that Diaphoretick Wine, was spent by sweate. Some laxatives were given between whiles.

P. de Soff.
bait. Ephem.
Germani
an. 3. p. 487.

LII. In a long and pertinacious Colick, where the Constitution and Bowels are hotter than ordinary, Purging waters, or Whey, and Syrup of Violets are often given with great benefit: For both these Liquors, where they agree, drunk plentifully, cool the excessive heat of the Stomach and Intestines, and presently ease and make them lax when contracted by Spasms and painfull corrugations, or convulsively extended by wind. Moreover, whereby especially (as I think) they doe good, by insinuating Saline particles of another nature into the morbidick matter, they tame and subdue the other saline and irritative ones that are in it, and often carry them off by Purge. ¶ Above all other Remedies whatever, Iron-mine Spaw-waters, drunk for a month

Willis, op.
de Colicis.

month in Summer-time, use to give the most relief: But when they are drunk, great care must be taken, that they be discharged again by Stool and Urine; lest perhaps if they should make any long stay in the body, by running into the head or feet, as they often do, they might cause the *Vertigo* or Gout. ¶ In a phlegmatick and flatulent Colick, Spaw-waters have no place, because they cool the Intestines, and double the Pain: and because they have no passage by reason of Costiveness, they distend the Belly, and encrease Pain. In a bilious perhaps they may be allowed, if the Body be loose and the Stomach rich, as can safely and easily bear the drinking of them. For *Galen 6. de loc. aff. c. 2.* writes, that reaching and vomiting are urgent in the Colick, and indeed far more violent, than in the Stone, and that the Patients vomit Phlegmatick and corrupt stuff: for the Stomach, when the Intestines are affected, does sympathize.

Idem, ibid.

Sebifius, de Acidulis, Sect. 2. differt. 2. Sect. 44.

Idem, ibid.

Hofferus, Herc. Med. l. 3. c. 5.

Willis.

Erich. Med. pract.

Willis.

Rolinc, conf. 3. l. 7.

LIII. Diureticks usually doe more good than sweats, whereby when the blood is dissolved, and its ferocities are plentifully precipitated, then the fewel of the Disease is cut off, and the mass of blood being emptied receives part of the morbidick matter, so that upon this account its reliques are easily dissolved.

LIV. Bathing must not be allowed them that labour of such a Colick; for usually their bowels are too hot, and hereby they are more heated, and the pain is encreased: Then, in an Afflux of that matter, which first bred the Colick, before the nerves be affected, the muscles are first filled, so that they cannot receive the animal Spirit, which is the chief operator of sense and motion, or, if they do receive it, yet they cannot doe their duty, because of their feeble and weak constitution, which bathing increases, and so helps to a worse translation of the matter, according to *Aphor. 5. 16.* But if all things have been tried in vain, and the pain cease not, nothing hinders but we may put the Patient in a Bath, and industriously cause a Translation of the humour, because so the morbidick matter is translated from the more noble to the ignoble parts, when there is no place for evacuation, that is, a violent Disease must be cured by one more gentle: for the bastard Palsie, that follows, in process of time goes away of it self, or is forced away by fit Remedies. ¶ Baths and Sidorificks are commonly prescribed in the Colick, yet, as far as I could observe, seldom with good success: Because these things by exagitating the blood and nervous humour, cause them to throw off more into the matter of the Colick, and the matter lodged there already, to boil and rage the more; and they very rarely discuss the matter perfectly.

LV. In the Colick Passion Diaphoreticks and Sidorificks must not be neglected, seeing it is observed by *Carolus Piso, Sect. 4. Concerning Diseases of the lower Belly from ferous matter, cap. 2.* That oftentimes these pains are much eased by spontaneous sweats, and are averted by discussing wind. And often Bile, the cause of the Colick pain, is by a spontaneous critical motion of Nature, thrust out to the outer skin in an universal Abscess. See *Castrensis, lib. Quæ ex quibus.*

LVI. We must have a care, lest by using hot things, taken inwardly, or applied outwardly, the humours become adust, and raise an inflammation. ¶ I have observed in some constitutions and tempers, that Epithems of hot things, or applied hot, rather enrage than abate the pain: Wherefore in these cases it seems not amiss to apply fomentations of a solution of Nitre or Sal Ammoniack, as in pains of the Gout, and sometimes (as *Septalius* reports) of pure cold water.

LVII. Some use a girdle wherewith they bind in the Belly strait. But I think it is to no purpose, and that it rather increases than diminishes the pain: For when the Belly is squeezed, the Colon also is

strained, and the windy matter makes the more reluctance, whereupon the pain is enraged.

LVIII. The same matter does not always cause the pain which causes the obstruction, but sometimes a divers. For store of wind with retention of the Excrements, both dissolves continuity, and causes Pain and Obstruction. But when wind is not so plentifully, and the Excrements are hardened, it is another thing that causes the Pain; for it is often observed, that a man has not gone to stool for several days, and that the Excrements have been retained without the Colick: but upon the arising of wind afterwards the Colick hath risen. If therefore the Colick be caused by some hard Excrements, hindring the passage of the rest of them, and of the wind, emollients must be used, and afterwards sharp things to irritate the faculty.

Sennertus.

LIX. When a man had recovered of a Catarrh, he fell sick of a very troublesome Colick, which encreased towards night: before it came upon him, just as he had done eating, he vomited up some pounds of clear water, without mixture of any thick Chyle. The cause of the Colick seemed to me to be the thickness of the Chyle, which for want of liquid Serum, when it could not pass the Intestines freely, raised the Gripes. I knew a Minister tormented with the Colick, who by vomiting great store of water was cured. Wherefore Hydragogues must frequently be used in the Colick, by help whereof I have often cured Patients by purging.

Bartholinus, cent. 5. obs. 58.

LX. A Girl, about two years old was tormented with periodical pains about her groin, so that neither lying, sitting, standing, nor carried in Armes, she could find any ease from her pains. This pain returned at set times; she was well from ten at night till twelve the next day, the third fit being ended, and no manifest crisis appearing, she lived free from it afterwards. There was no sign of worms; therefore I do not question but it was a flatulent Colick, residing rather in the muscles of the Belly, than in the Colon, for she was loose enough: I cured her by anointing her Belly with distilled Oil of Wormwood and Cumminseed, and giving her some Treacle in Hartshorn water.

Idem, hist. 59.

LXI. Mr. Puri of Newenburgh in Switzerland, four score years old, but a lusty man of his age, being taken with a violent pain in his left side, called a neighbouring Chirurgion, who taking him to be sick of a Pleurisie, let him blood, whereupon his pain grew worse. His Son, a worthy Pastor in the City, brought his Urine, and asked my advice. I enquired of him whether his Father had drunk any new wine lately, (it was in November) which in that year 1659. had got no ripeness. He told me, yes, and added, that his pain was below his Ribs, and not fixt in one place; I foretold him that letting blood would prove fatal to him, and indeed he died in three days, past all remedy.

LXII. No Disease almost requires a more speedy aid from Physick than the Colick, and Gripes that happen in the Scurvey. Against these evils Clysters of divers sorts, Fomentations, &c. are used. The use of Opiates is found here very necessary. Certainly *Riverius* his Rule, That purging Pills should have Laudanum in them, is very proper here; for when sleep is caused, and the Patient a little purged, the Paroxysm is frequently at an end. And testaceous powders, by which the sower salts are either imbibed or fixed, conduce very much to the driving away of the morbidick cause. For example; Take of Powder of Crabs eyes, Egg shells each 1 drachm and an half, Pearl 1 drachm. Make a powder for 4 doses, to be given in a decoction of the root and seed of Burdock, every sixth hour.

Willis.

LXIII. In a long Colick when all other remedies did little or no good, I have often known this medicine given once or twice to raise a Salivation, and give the Patient ease. For if at any time the morbidick matter be plentifully gathered, and deeply rooted, in the nervous folds, cannot be removed by other Medicines,

Medicines, the Mercurial Particles spreading themselves every way easily dissolve and divide it into minute parts, dispell them this way and that, and at length wholly dissipate them. Wherefore in a long and pertinacious Colick, they may sometimes be given with success to raise a Salivation.

Idem.

LXIV. A horn Cupping instrument is highly esteemed among the Indians dwelling under the torrid Zone; who, as they were curing a young man sick of the Colick, first gave him a Clyster with their mouth, and presently applied horn Cupping instruments to his Belly. And sucking the Air out at the little hole, they stopt it presently with their finger, both to make the instrument stick fast to the skin, and to get the wind out of the Bowels, which by these means the Barbarians did most successfully from the young man.

N. Tulpus,
l. 3. cap. 49.

LXV. Galen says that the wind Colick is cured as by charm, (and Crato approves it) if a large cupping-glass with much flame be applied to the Belly near the Navel. Observe, near, not upon the Navel, lest swooning follow, by reason of the commerce between the umbilical vessels and the heart. For a man certainly dies, if the skin be flayn off the Navel, although he may live if he be flayn all over besides, a punishment very common among the Egyptians.

LXVI. This mixture is one of the highest specifics, which I have often used successfully: Take of Spirit of Wine 1 drachm, Spirit of Nitre between half a scruple and half a drachm, Spring water 3 ounces. Let him take it, and being well covered, let him compose himself to sweat, and keep himself quiet: For it is the best way to lie still, how difficult soever it be. This is good, especially when the wind is enclosed between the membranes.

Hartman.
prax. chym.

Medicines especially made use of by eminent Physicians.

1. In the Colick, especially if it pain a man about his stomach, they say the broth of the juice of sweet Almonds is good, with some grains of long Pepper in Hippocras Wine. I have seen the pain laid with a caustick Plaster that would almost make an Eschar, and draw outwards, being applied near the Navel.

Guliel. Bal.
lonius.

2. They say it is a most effectual remedy which is made of white Pigeons dung, boiled in water till half be boiled away, adding a little Dill seed to 2 ounces of the liquor strained, and so drunk. ¶ One man commends 2 ounces of Nitre, with an equal quantity of water and oil, given by Clyster; for it wonderfully draws out thick matter, and dry, compact Excrements. ¶ The Osprey that digests all it devours, has one wonderful Intestine: It is evident that the extreme part of it tied to one, causes the Colick. ¶ The Guts of a Wolf dried and given in drink are a good Remedy.

Alex. Bened.
dictus.

3. I know a man who with the Spirit of Elderberries, as with shewing a Gorgon's Head, presently discusses the Colick pain very familiar to him: It is of great virtue in this Disease.

Blolkwit.
zius.

4. Mercury water given inwardly takes away the Colick radically, and it is thus made. The Mercury is first reduced to a Water, into half of this water put crude Mercury purified, which is also converted into water, and must ascend. ¶ Also Spirit of Turpentine given to 12 or 13 drops, is a most excellent Remedy.

Capivaccius.

5. In the wind Colick Mesues commends Oleum de Kervaa as an admirable thing, because it discusses wind most powerfully.

6. An admirable Clyster, and experienced by me in the Colick, Take of Wormwood, Rue, Fenel, each 1 handfull, Salt 2 drachms, common Oil what is sufficient. Boil them, and make a Clyster; and anoint for several days.

Seb. Corti.
lio.

7. Speedwell is especially commended, which cures the Colick specifically: It is boiled in Chicken

Broth, and to 1 pound of the broth let half a pound of Malmsey wine be added, and half a drachm of Myrrh, and so given in a Clyster. ¶ Take of tops of Sea-wormwood, Chamæmil, each 2 Pugils, white Frankincense 1 drachm. Boil them in a sufficient quantity of water, and to 4 ounces of the Colature add some Syrup of Chamæmil or Feaverfew, for 2 doses, I have cured most violent pains in the Intestines and Stomach with it. ¶ Oil of sweet Almonds drunk with Malmsey wine is very good; I add half a drachm of fresh Sperma Ceti, and account it among my effectual and secret Remedies. ¶ For preservation from the Colick a Girdle of the Guts of a Wolf dried is good, he must be girt with it day and night.

¶ The following powder hath been often tried by me in white wine; Take of Cinnamon 3 drachms, Galangale, Calamus Aromaticus, each 1 drachm, Bayberries 1 drachm and an half, Cumminseed 2 drachms, burnt Hartshorn 1 drachm and an half, Juice of Rue half a drachm, Aniseed, Fenelseed, each 4 scruples, Cloves half a drachm, make a powder; add Spec. dianisi 1 drachm and an half, Sugar 5 drachms, 2 scruples. Make a powder. The following Plaster is famous in the Gripes; Take of Emplast. de baccis Lauri, de Meliloto, each 1 ounce; mix them, make a mass with Oil of Chamæmil and Rue. ¶ In the Colick and Hæck Passion 1 scruple of Extract of Calamus Aromaticus, taken with some Syrup is very good. ¶ In the beginning also a Decoction of Speedwell in wine with half a drachm of Myrrh may be drunk, when the pain is violent. ¶ When no other Remedies would doe good, I cut some root of Masterwort, put it in a Glass of wine, and gave it to drink every day before Supper, and the Pains began to cease. ¶ Crato experienced the virtue of this Oil in several. Take of Gum Galbanum, Elemi, Ivy, Oil of Bays, each what is sufficient, distill it, and keep the first water apart, then the clear Oil, thirdly the thick Oil. He applies this Plaster to the Muscles of the Epigastrium; and successfully discusses the reliques of the Crato Disease.

8. Take of Malmsey-wine, oil of Nuts, each 4 ounces, Aqua vite 1 ounce, of distilled oil of Juniper and Rue 2 drachms; Mix them, give them hot. By this Clyster intolerable pains raised by wind and vitreous phlegm are cured to a wonder. ¶ Oil of Ground Ivy taken at the Mouth, or by Clyster, hath an admirable virtue in laying the Colick, and other Pains of the Intestines. ¶ The Secret of Joseph the Jew; fill an earthen pot with Wormwood cut very small, pour some of the best Wine to it, steep it 24 hours, then pour off one part of this macerated juice or liquor into another vessel, then set what remains on the fire, and boil it, pouring on by little and little some portion of the liquor reserved, till all the Wine be boiled away, you will find a red Powder sticking to the sides of the pot, which you must scrape off, and give of it three days in the morning as much as will lye on a Knifes point in some generous Wine; It takes away all Gripes.

Claudius
Deodatus.

9. Among outward applications to assuage a Scorbutick Colick nothing is better than green Henbane boiled in Milk, put in a cloth, and applied to the Belly warm. ¶ An ounce and an half, or 2 ounces of oil of sweet Almonds taken in some Chicken, or Pease Broth, is very good to assuage the pain, and remove the Convulsions of the Intestines.

Draconius.

10. The Quintessence of a Fox-Cub, by a certain wonderfull faculty, quickly cures the Colick; yea, he that carries this Arcanum about him in a Glass-bottle well stopt, will never be afflicted with any pain in his Stomach and Guts.

Joh. Pet.
Faber.

11. This is a most excellent thing to allay pain; Take of the Powder of the Testicles of a Horse prepared 1 drachm, Powder of Aniseed 1 scruple. Mix them, give it in Wine, or Broth. ¶ Also half a drachm of the Powder of the Sponge that is found on the wild Rose-tree, given in Wine is good. ¶ Also a drachm of Rie flower may be given in Wine.

Rod. à Font.
feca.

Jacob. Fontanus.

12. If the Colick be caused by Choler, it is an admirable remedy to drink 1 drachm and an half of dried Acorns in powder, in some Wine or Broth, with a few grains of Musk in curing of Men.

Joh. Freitagus.

13. This makes an excellent Balsam for the Colick, if an oil be distilled from a mixture of half a pound of Galbanum, and clear oil of Turpentine, to which, afterward, put an ounce of oil of Lavender, and distill it again, it becomes a generous Balsam, which circulated some time with Spirit of Wine, becomes most excellent and penetrating, if with oil of Venice-Soap, and a few drops of Spirit of Camphire mixt with it, it be applied to the Navel.

Galen.

14. Wolf's dung powdered, and given in Wine is wonderfull good.

Frid. Hofmannus.

15. I have found in my practice this Plaster doe much good; Take of *Emplastr. de bacis Lauri* 6 drachms, *Unguent. de Arthanita* 3 drachms, Nitre 1 drachm, Oil of Amber half a drachm. Mix them, make a Plaster.

P. Laurenbergius.

16. An efficacious oil of Daffodil is made of Daffodil-flowers steeped in Oil-Olive, which is proper, both anointed outwardly, and given in a Clyster.

Ortolphus Maroldus.

17. An infallible Powder for the Colick; Take Crabs No 100. set them in a new earthen dish in an Oven, when the bread is drawn, but burn them not. Make a Powder. The dose is a spoonfull or two in good sweet Wine hot, and the pain will assuage by degrees. ¶ This is a good experiment of *Carpus*; Take some Mouse-dung made up with Oil-Olive into the form of a Chestnut, and lay it on the Navel.

Panorolus.

18. I have often had experience of Oil of Bay-berries, or Orange-Pills drawn with Wine by expression: which being done, the Patients in a short time finding ease, fell asleep, and recovered.

Simon Pauli.

19. There is a singular Medicine made of that yellow bitterish membrane or coat, which most closely invests the Kernels of Walnuts, 1 drachm of it powdered is given in Wine for the Colick, warm.

Joh. David Rulandus.

20. Rotten Dung found in Stables, where Beasts piss, fried in Oil and applied, wonderfully eases the pain. ¶ Let warm Sheeps-dung be long mixt with Goat's Sewer, strow on it Powder of common Pitch. Mix them and apply it warm, without doubt it has a wonderfull effect. ¶ A Clyster made of Dog's-turd boiled in Wine with a few Figs, eases the pain of the Colick and Stone. ¶ Hare's dung dissolved in Wine and drunk, cures a desperate Colick.

Saxonia.

21. I do upon my credit profess, that I have in one day cured the Colick coming of phlegm with 2 drachms of *Diaphanicon*, and 2 drachms of *Spec. Hiera*, and presently took away the Pain.

Schroderus.

22. A Carminative Water made of Chamæmil is of great virtue in the Colick. ¶ An Electuary, or mixture of Garlick is good in the Colick. ¶ A Cataplasim of Chervil is good. ¶ Ear-wax is a present remedy for the Colick, if it be taken in drink.

Schwentfeld.

23. A Lark with her feathers burnt to powder in an earthen pot, and three spoonfulls of it be drunk with hot water for two or three days, is an incredible remedy for the Colick, and all Pains of the Guts.

Sofenander.

24. Powder of the Huckle-bone of an Hog, burnt, given in Wine, wherein Seed of Sermourain and Chamæmil-flowers have been steeped, I have often tried to be an effectual remedy in this case.

V. rignani.

25. A decoction of Coltsfoot in Water or Wine is a most effectual Remedy.

Weikartus.

26. The white part of Hens dung powdered, and given in Pansey, or Pimpernel-water, is a present Remedy, especially for children.

Zimera.

27. Cinquefoil dried and powdered, and 2 drachms of it drunk in generous Wine is a present Remedy.

Colica Hysterica, or the Hysterick Colick.

Its Description and Cure.

There is a sort of Hysterick disease, that vexeth some Women, and is so exactly like a bilious Colick, as well in the sharpness of Pain, as in situation, even then also yellow and green humours being cast up by Vomit; that I must treat of it, lest it be taken for the bilious Colick.

Women who are of a lax and crude habit of body, do contend with this evil above others; and they that have laboured sometime formerly of some hysterick affection; or (as it often happens) they that have scarce escaped after difficult and laborious travel, by reason of a large Child, which hath too much exhausted the Mothers strength and nature. A pain, very little milder than in the Colick and Iliack Passion, at first seizeth the region of the Stomach, and sometimes a little lower, which is attended with enormous Vomiting, sometime of green matter, and sometime of yellow. And they accompanied (as I have often observed) with greater dejection of mind and despair than in any other disease whatever. After a day or two the pain ceaseth, which, nevertheless, within a few weeks, returns more cruel than the fit before. Sometime it is accompanied with a Jaundise conspicuous enough, which, in a few days, vanishes on its own accord. All Symptoms ceasing, when the Patient thinks her self well enough, the least commotion of mind, whether it be raised by anger or grief (to which, in this case, Women are very subject) commonly recalls the pain; the same may be said of walking, or any other exercise unseasonably undertaken, seeing by such causes Vapours are elevated in a lax and infirm habit of body. When I say, Vapours, whether they be such, or *Convulsions* of particular parts; the *Phænomena* may equally be solved either way. These Vapours, or Convulsions, when they invade this or that region of the body, produce Symptoms accommodate to the part they invade: And therefore, though they cause one and the same disease every where, yet they exactly resemble many, wherewith the wretches are tormented. Which is clear from this disease, that, when it possesses the parts adjacent to the Colon, is as like a bilious Colick as can be. Nor is it less apparent in many other parts of the body affected in the same manner, for example; Sometimes it affects one of the Kidneys with a most violent pain, whereupon follows Vomiting; and sometimes also the pain being carried along the duct of the Ureter, it resembles the Stone; and when it is exasperated by Clysters, and other Medicines, that are lithontriptick, and designed to void the Stone, it long afflicts the Patient after one and the same tenour, and now and then (which is contrary to its custom, because of it self it is without all danger) brings her to her grave. Moreover, I have seen Symptoms produced by this disease, that were altogether like the Stone in the Bladder. It is not long since I was called out of my bed one night to a Countess my neighbour, who was taken with a very violent pain in the region of her Bladder, and a sudden stoppage of Urine. And because I very well knew she was subject to divers hysterick diseases, and therefore guessed she was not sick of that disease she took her self to be sick of; I would not suffer the Clyster to be given her, which her Maid was making ready, lest her disease should thereby be increased: but instead thereof, and of Emollients, as Syrup of Marshmallows, &c. which the Apothecary brought; I gave her a Narcotick, which presently put a stop to that Symptom. Nor indeed

deed is any one part of the body altogether exempt from the assaults of this disease, whether internal or external, as the Jaws, Hips, Thighs and Legs; in all which it causes intolerable pain, and when it departs, leaves a certain tenderness, that cannot endure to be touched, just as if the flesh were fore beaten.

But as I have by the bye delivered some things pertaining to the history of the Hysterick Colick, lest namely it should be mistaken for a bilious one, so I shall by the way likewise touch certain things that make for the cure of the Symptome, the pain which accompanies it. For the radical cure, which takes away the disease, by taking away its cause, is for another Speculation and Place.

Letting blood and repeated Purgings, which are most plainly indicated in the beginning of a bilious Colick, have no place here, except in the case hereafter mentioned. For experience teacheth, that the pain is exasperated, and all other Symptoms grow more violent, being helped on by the tumult, which these things raise. And thus I have more than once observed, that the repetition of Clysters, even of the gentlest, has brought on a long train of Symptoms. Reason also will second Experience, which tells us, that this disease is produced rather by some ataxy and inordinate motion of the Spirits, than by any fault of the humours; to wit, if we well consider those circumstances, to which, for the most part, it owes its original; Such as are great and undue profusions of blood, violent motions either of mind or body, and things of the like nature. All which things forbid the use of those remedies, whereby a greater perturbation of Spirits may be raised; and instead of them Anodynes must be used, though the green and ill colour of the matter Vomited seem to indicate the contrary: For the speculation of Colours is too subtle and minute, to be able to give any authority to evacuations, which *ipso facto* we find hurtfull. And I do not at all question, but this disease (which though it cause much pain, yet never death) oftentimes becomes mortal, through errors committed upon this account. Besides, if one should give a very strong Vomit to day, that he may, as he thinks, get out the matter of the disease; the Patient will, the next day, Vomit matter as green and ill coloured as she did before.

Yet we must take notice, that sometimes such store of blood and humours is found, that it so far hinders the operation of the Narcotick, that be it never so often repeated, it will never stop their fury, except the Patient be first let blood, or purged; which I have observed in Women of a more sanguine complexion, and in Viragoes. If the case stand thus, way must be made for the Anodyne by letting blood or purging, or it may be by both. For after either of these is done, the Narcotick, which, given in the highest dose before, would doe no good, will now in a very moderate dose obtain the effect for which it was designed. But this thing seldom happens, and when it does, these remedies must not be repeated. Which things being premised, we must proceed in giving Anodynes, if there be occasion for them, in that method, which we proposed in the bilious Colick, and they must be given more frequently or sparingly, according as the pain returns. Which method indeed onely respects the present and instant Symptome of most violent pain: for in this place I have not undertaken to treat of that, which opposes the Cause of the Disease.

Coma Vigil, or the waking Lethargy.

The Contents.

Narcoticks are given with benefit. I.

An Idiopathick one must have one cure, a Sympathick one must have another. II.

I. **A** Waking Lethargy is seldom a Disease of it self, but is for the most part a Symptome, and follows other Diseases, as a Fever Phrensie, proper Lethargy, and such like: Wherefore it requires not a peculiar method of cure, onely there seems to be a necessity that other Cephalicks be joined to the remedies primarily indicated, which may dispell these Meteors of the Brain like Clouds and Lightning, or if both of them together (*Waking or Sleepiness*) cannot be removed, let the Medicine take part with one of them, that being made stronger, it may conquer the other; so that in a sleepy watchfulness, it is convenient to cause either perfect sleep, or perfect watchfulness. For in this case I have often given Narcoticks with good success.

II. The Cure of a waking Lethargy, that is Idiopathick, is performed by the same means, whereby a Phrensie and a Lethargy useth to be cured; and if it incline more to a Phrensie, the remedies for a Phrensie must be most used; but if it incline more to a Lethargy, then things proper for a Lethargy must be most used. But the cure of a Sympathick Coma depends on the cure of the malignant Fever, whence it had its original. Yet Remedies that make revulsion of those Vapours from the Brain, must peculiarly be used in the beginning. And if any thing appear to be fixt in the Brain, Derivation by opening a Vein in the forehead, or by setting Riverius. Leeches behind the Ears, &c. must be endeavoured.

Combustiones, or Burns.

The Contents.

Whether the Cure should be performed by Coolers? I.

A Remedy that heals without any footstep of a Scar. II.

Whether the Blisters should be opened presently? III.

The heat must be extinguished with Internal things. IV.

Medicines.

I. **S**OME, according to the thread-bare Axiome of Physicians, That Contraries are Remedies of their Contraries, think that Burns should be cooled, and therefore that Coolers should presently be applied to the burnt-parts; but this opinion hath its rise from a false ground, namely, that Burning is onely Alteration, and an Induction of a hot quality, when yet the very fire and its Atoms are communicated to the burnt-parts, and an *Empyreuma*, as all must confess, is brought upon it. For what is this *Empyreuma* but the small particles of the fire, which have insinuated themselves into the burnt-part? And Experience it self teaches, that Burns are not cured with cold things, but that by them, the fiery particles being repelled inwards, the Pain is increased, inflammations, yea, and Gangrene and Mortification is caused; whereas hot things, that take out the *Empyreuma*, doe good: For even the Vulgar know, that the burnt places must not be put in cold water, but rather held a while to the fire. Now Likeness causes attraction, and the external

Sennertus,
praef. l. 5.

ternal fire draws out the internal, and what is burnt into the part, as *Paræus* speaks. ¶ If contraction arise from a Burn, it will be cured by drawing out, and tempering the heat communicated to the part, and by altering as well the containing as contained parts, vitiated by the fire. Fat things draw out the fiery heat, as being the true fuel for fire: And Oil of Walnuts and Rapeseed are commended above all other things. Acids allayed with a lixivious Salt, such as a solution of red or white Lead made in distilled Vinegar: For the sharpness of the Vinegar is taken off by the Lead changed into *Ceruss*, or *Minium*, whereupon the Vinegar grows sweet: this Vinegar impregnated and edulcorated with the Lead, if it be shaken together with some Oil, will become a Mixture like an Ointment; for the Oil grows thick with the acid Spirit of Vinegar dulcified by the Lead: And while this Liniment is applied, and the relics of the fire penetrate the Oil, its force is more broken by the Acidity joyned with it. And the vitiated parts are corrected and amended of the burning, especially by the acid Spirit joyned with the Fat. For seeing the external fire does first of all seize the fatness and oiliness of the parts of the body; when that is consumed, their Lixivious Salt, that used to be tempered with it, grows sharper, the acid Spirit vanishing together with the fat. Whence it is manifest, both the Oil and acid Spirit must be repaired and restored, that the acrimony of the Lixivious Salt may be tempered. Now both concur in the said mixture, wherein is store of Oil, and that tempered with an acid Spirit, but refract: Whence it is that the retorted Salt, does not make any effervescency upon meeting with the acid Spirit, because broken; but is gently corrected by it, and reduced to its former temper. And these same things are not onely proper in Burns that cause shrinking, but in all: For by these and the like Remedies I have several times cured Burns.

Sylvius de
Boë, praef.
Med. l. 2. c.
23.

Omnibonus
Ferrarius,
Art. med.
Infant. l. 4.
c. 25.

Sennertus.

Wedelius.

II. Take Whites of Eggs, No ij. Oil of Roses 2 ounces; Mix them well, then let a piece of thin white Linen or Silk be wet in the Liniment, and applied to the burnt place, and let it not be taken off till the ail be healed; but every day twice or thrice at least, let the Linen be wet again: After 4 days are over, instead of Whites take Yelks of Eggs, and so let the use of it be continued, till it be skinned over again. Then, as a new skin comes, the dead skin must by degrees be clipped off day by day, till it be all taken away; which done, no mark of hurt will appear.

III. If Blisters and Pustules arise, and the Sore be not at all the worse, they must not presently be opened; for if they should, the place will smart, because the skin is laid bare, and the cure will proceed more slowly; but on the third day, when the skin begins to grow again, they should be opened, and the opening must be deferred no longer, lest the contained humour grow sharp and erode the skin.

IV. The Heat may be restrained at the same time inwardly: *Digby*, in his Treatise of the Sympthetic Powder, highly commends Spirit of Salt, as an excellent Balsam for this purpose.

Medicines especially made use of by eminent Physicians.

1. That hair may grow on burnt places; Take Fig-leaves fried in Oil, and apply them with some Ointment instead of a Plaster. *Agrieta.*

2. This is wonderfull good for burns; Take of Verdigrease and Litharge of Silver, equal portions, mixt with Wine and Oil. Anoint with a Feather. *Abius.*

3. Oil of Saturn is very good for Burns. ¶ For Burning or Scalding, in Oil, Fire or Water; Take of Oil-Olive 2 ounces, Whites of Eggs No xvj. shake them together, till they become an Ointment: anoint the place. There is not a better Medicine in Nature. ¶ Take *Saccharum Saturni* what is sufficient, add Oil of Roses; Mix them, make an Unguent, anoint the place, within 24 hours it extinguishes the heat. *Joh. Agricola.*

4. For Burns; I have known people cured in 9 days, who have been burnt with Gunpowder or some other way, with an ointment of pure and fresh Oil of Nuts, mixt with as much Yelks of Eggs, anointed on the burn twice a day. ¶ A good Ointment also is made of the middle rind of Elder, cut and mixt with the fat of a Loin of Mutton, Oil-Olive, and Juice of Prick-Madam; or with Oil onely. ¶ A wonderfull Oil for a Burn: Let fat boiling gently fall drop by drop upon Bay leaves, anoint the burnt place with this Oil, and in 3 days it will be cured, as by enchantment, though the place be very fore Burnt. *Pet. Borel-lus.*

5. Take Water in which Quicklime is quenched, shake it till it be thick, with Oil of Nuts first boiled, and anoint the place 7 days. It is a present Remedy. *Chalmers.*

6. Take fresh Butter not salted, boil it with Goose-dung, strain it over cold fair-water: Melt it again, and pour it on fair-water as before: The oftner this is done, of the greater virtue it will be: Last of all, let it be washed in Rose-water. Anoint the place with it, it presently asswages the pain, and cures old deep Ulcers caused by Burning. *D. Martelli-us.*

7. The following Unguent powerfully draws out the Burn, and suffers not Blisters to arise; Take raw Onions 2 ounces and an half, Salt, Venice-Scope each 1 ounce; Mix them; Add of Oil of Roses and of sweet Almonds, what is sufficient. Make an Unguent. ¶ The Cure of the second degree of Burning; Pickle wherein Sauces are kept, made of Vinegar, Water and Salt; if cloths be dipt in it, and applied (but not to the eyes) doth wonderfully repress the humours, assuage pain, and oppose the Burning. ¶ This is a most excellent Unguent for all Burns; Take of fresh Butter washed in Rose-water 3 ounces, Oil of Olives, Eggs, Sweet Almonds, each half an ounce, Barly-flower 2 ounces and an half, Saffron 1 drachm, Mucilage of Quince-Seeds 1 ounce and an half, Wax what is sufficient. Make an Ointment. It mollifies, lays pain, and, by little and little, brings a Cicatrice. ¶ This is a most excellent Unguent in all Burns. Take of *Diapalma* Plaster 2 ounces, fat of a Hen, a Goose, each half an ounce, melt them; add of burnt Alum, calcined Lead, Litharge of Gold, *Lapis Calaminaris* each 1 drachm, with as much Mucilage of Quince-seed and Fœnugreek as is sufficient in a Leaden Mortar, make an Unguent. *Gul. Fabricius.*

8. A Man's Face that was burnt with Gunpowder, was restored and healed with Butter of Saturn, presently applied with Spirit of Henbane and Mandrake, and Rose-water, these Remedies being often changed, that they might take off the acrimony of the burnt Nitre. The pain ceased within three or four hours; and within six or eight days he was perfectly cured, onely with Butter of Saturn and Yelks of Eggs. And the Butter is made thus; Of red or white Lead, or Litharge well boiled in Vinegar, that Vinegar filtered is joyned with Oil of Violets,

Violets, or of Yelks of Eggs; and these two, with much shaking, are converted into a Butter, which is called Butter of Saturn. It is a secret for all burns.

Joan. Petrus Faber.

¶ The earth of Quick-lime, deprived of all its Salt, by many washings, is a very effectual Remedy, if it be mixt with Oil of Violets.

Forestus.

9. A Boy of mine, being sick of the Small Pox, fell in the fire and burnt his eyes; but after I had made a Mucilage of Quince Seeds in Rose-water, and anointed his eyes often with it, the Child recovered to a miracle, without any mark of burning: Which Remedy I have also used with success in others.

10. Oil of St. John's wort mixt with washed Lime, is a most effectual Remedy in any Burn, though it be with Gunpowder. ¶ If the hands or feet be scalded, hold them a good while in strong Vinegar, or apply Linen-clothes dipt in Vinegar, and not strained out: for it allays pain and heat, and hinders Blisters. ¶ The Juice of Onions is reckoned also a most excellent Medicine; or raw Onions pounded with Salt and applied; but this must be done in the very beginning, while the Skin is whole, and not excoriated; otherwise it would doe much harm.

¶ If a Burn be caused by Shot, Take of Litharge a quarter of a pint, boil it gently in an Iron frying-pan, till the Vinegar tast sweet; then separate it for use. Take of this Water 1 ounce, in which dissolve of Nitre 1 drachm, Camphire 1 scruple. Mix them, make an Unguent, which must be injected hot into the wound by a Syringe, and a tent must be covered with this Balsam; Take of Oil-Olive half a pound, Turpentine 4 ounces, best White-wine a pint and an half, Flowers of St. John's wort 3 handfulls, Mullein a handfull and an half, Red-roses, Chamæmil, each 1 handfull, lesser Centaury 1 handfull and an half, Celondine Flowers half an handfull, Self heal 1 handfull: Draw off the Wine by an Alembick in ashes, then strain the Oil from the Flowers, put fresh Flowers again to it, and digest it for a month in the Sun. This is a most powerfull Balsam in all wounds. ¶ This also is admirable; Take Oil-Olives 3 ounces, put to it some Elder, or Rose-Vinegar, shake them, till they come to the consistence of an Unguent. Anoint the Sore with this Ointment.

Sam. Hefner.

11. Take Ly made of Quick-lime, and common Salt, put to it a little Oil of Hemp-seed, Olives, Linseed, and some Whites of Eggs, let them be all well shaken together, and the burnt place anointed. It heals without all pain, leaving no Scar behind, as Semienovius testifies.

Athan. Kircherus.

12. I have anointed the sore place with Cowsdung mixt with Linseed-Oil, and heated over the fire, and it did a great deal of good.

Kornthavenus.

13. An admirable Plaster for a Burn. I have used several things, and I approve of nothing above this: for as soon as it is applied it asswages pain, afterwards it takes it away, and presently heals with infinite celerity; Take of Litharge of Silver a pound and an half, Hogs-lard purified a pound and an half, Pontick Wax a pound and an half, six Yelks of roasted Eggs, which you must bruise and mix with the Litharge powdered; Melt the Wax with the Lard, then let them cool, and afterwards mix all together.

Scribonius Largus.

14. Take Bay leaves, let some burning Bacon drop upon them from on high, till the Leaves be turned into ashes, let the Ashes with the fat be reduced to the form of an Unguent; Anoint the burnt place twice a day: and you will find it whole in five days.

Amatus Lulitanus.

15. Moist Clay (if the burn be not deep) applied to the place is an easie and good remedy.

Panarolus.

16. Take scalding hot Butter, pour it on cold Water, shake them so long together, till the Butter be like Snow. Separate it from the Water and keep it. Anoint the Burnt place all over thrice or oftner a day. It certainly cures any Burn.

Paracelsus.

Prævotius.

17. Oil wherein Red Poppy Flowers have been infused for a year in the Sun, is admirable.

18. Water distilled off the leaves and roots of Fern is exceeding good, if applied with clothes wet therein. ¶ Take of Phlegm of Vitriol and Alum each half a pound, Mullein flowers, and black Ivy-leaves each 1 handfull, of Snails, Frogs, Creyfish, each No. x. distill them in a Leaden Alembick in a sufficient fire. Foment the burnt place with this Water five or six times a day.

Quercetanus

19. Anoint with Oil of Sulphur morning and evening, apply Emplast. Diaphanum, and the pain will presently cease, and the Sore heal.

Rulandus.

20. If the Skin or Beard be Burnt by a Shot, this is a good easie Medicine; for it hinders Blisters, and breeds Hair; Take the Juice of Onions roasted in Ashes, wherewith anoint the Burnt or bare place three or four times every day.

Schrad.
Querc. reds.
viv.

21. A Chirurgion anointed a Man's Face that was Burnt with Gunpowder, with this singular Ointment four times a day, and in a weeks time he cured that huge Burn, without any Scar; Take of Fresh Butter often melted and washed in Water, of Frog-Spawn 6 ounces, Oil-Olive 2 ounces; Mix them, make an Ointment.

Scultetus.

22. Take live Crabs, as many as you please, as much Fresh Butter as is sufficient, boil it and scum it, put in the Crabs bruised in a Mortar; boil them till they grow red, afterwards strain it and keep it for use. It is very effectual.

Sennertus.

23. Nothing is better than a Glew made of the Ears and Genitals of a Bull.

Zimara.

Contractio, Convulsio, Convulsi Motus; or, *Contraction, Convulsion, or Convulsive Motions.*

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Medicines.

I. **T**hat you may know, when in people convulse blood should be let, you must distinguish, whether the body be full of humours; yet wanting a Fever, or be accompanied with a torpid refrigeration: Or again, whether the body be lean and void of Excrements. So, when a Fever has preceded, or is coming on, through abundance of humours, and a prohibited discharge, blood must be let, yet not always in the beginning: For it should be deferred, till the dense Skin be opened, and the humours be made thin by the force and efficacy of the febrile heat; otherwise you must expect taking away blood will doe hurt; for this is the chief reason, why Men commonly fear to let those blood, that are cooled: But if this happen in a full body, we must not scruple to begin with blood-letting; for whatever Refrigeration proceed, it is manifest such bodies are convulse, because daily Efflux being prohibited, puts the blood in fastion, causes greater Repletion, and sometimes Convulsion.

tion. Besides, unless you first evacuate the body, you cannot use topick remedies without danger. Therefore you must go the middle way, and at first you must bleed more sparingly, as while the torpid Refrigeration is very urgent (in which *Hippocrates in Boacis* forbids blood-letting) although the Fever increase, yet we must use hot remedies at the first access of the Disease, whereby the humours that are concrete with cold, wanting spirit and heat, and therefore as it were immoveable, may return to their former natural state, so as to run freely by opening a vein.

Mercatus.

II. Convulsions that are without any inward Inflammation or Ulcer, and come of the redundancy of Humours, may be cured by Purging: But such as follow a burning Fever, or Phrensie, or any plentiful Evacuation, or inward Inflammation, or caused by Ulcers, are hurt by nothing more; for a Purge doth, by evacuation, dry the Nerves, and by its evil quality, irritate: After a burning Fever, or evacuation, the Nerves are dry: They that are convulse by wounds, are put up as with a *Phlegmone*; and crude Inflammations are hurt by the agitation, which Purges raise, and yield not to evacuations. I remember a certain person, who, when after a Phrensie he was taken with Convulsive Motions, did, contrary to my mind, by the advice of another, take a Purge, and a little while after, no evacuation following, died.

Vallesius, 5.
Epidem. 476.

III. *Hippocrates*, Aph. 57. 4. says, A Convulsion is cured by a Fever following, and lib. 2. *Epidem*, Sect. 5. he advises, if a Fever come upon a Woman in Childbed, to raise a Fever, which must be understood of a Convulsion from Repletion, which is familiar to Women in Childbed, so a Fever is not improper, as it consumes the Humours, and dries the Nerves. But seeing a Fever once kindled (which the *Arabians* allow to be an *Ephemera*) cannot be so moderated, as not to transgress its Limits (for a small one is to no purpose) and oppose the disease, and not hurt Nature, we must think of safer remedies, and indeed of blood-letting in Childbed-Women, which may be more safely done, because it is without suspicion of Putrefaction, which it is the nature of a Fever to cause. Besides, more strength is required to undergo a Fever, than letting of blood.

IV. *Hippocrates* 5 Aphor. 21. and 3 de morbis, in a *Tetanus* without an Ulcer, approves of a large profusion of cold water in the heat of Summer, which *Galen* accommodates to other kinds of Convulsions, that is, by help of the innate heat forced inwards, which consumes the matter of the disease, or by shaking the Body, and so removing the Humour sticking to the Nerves. *Paul* says, that this remedy is disapproved by latter ages: Yet *Valesius de Tarenta*, l. 1. c. 21. used it, and cured two of a *Tetanus* in this manner; He caused the Patient to be held upright by four Men, and poured 24 Buckets of Water upon his neck, and all his lower parts, and presently set him before the fire, and half an hour after anointed him from his neck to the end of his Back-bone, his Loins and Arms, with *Unguentum Dialtheae*, *Martiatum*, *Agrippae*, and oil of Castor, afterwards he gave him some Chicken-broth to drink; and so they both recovered.

V. Hot things are not convenient for a Convulsion caused by an Imposthume; nor for one caused by a hardness left in the conclusion of an Imposthume, because so the thick Humours turn as hard as Stone; nor for that which is caused by a hot Vapour, or biting. It remains therefore, that they are good for one caused by crude and phlegmatick alimental humours, not for crude ones, and such as are unfit for coction, which hot things would make harder. Which *Galen* 2. aphor. 29. explains, saying, that a Fever cures a convulsion caused by glutinous and cold Humours, whereby people are nourished: For such Humours grow thin by virtue of

hot things, and partly turn into sweat and vapour, and partly into the substance of the thing nourished; but crude and vitreous Humours, with hot things, do turn into knots and *Scirrhi*. They err also, who in a convulsion, caused by alimental phlegm, use hot things; because neglecting method, they consider not the cause, and what is urgent: For it often comes to pass, that the virtue of the Nerves is so weak, that it can do more in indicating its own preservation, than the phlegmatick cause can in its removal. For *Galen*, 5. aphor. 2. says, Hot things resolve the substance of the Nerves. Experience hath often taught me, that people convulse through repletion with cold Humours have been killed by using hot things.

Sanctorius,
Meth. 7. 2.
l. 15. c. 3.

VI. A Military Man had his whole right Arm shot off with a Cannon Bullet. When it was cured, a kind of Convulsion followed, in which the Head was drawn to the right-side, and his Jaws quivered. He advised with several, and when I came to him, and he related to me all his Ails, it came into his mind, that some latent Venereal Poison might produce this Evil: for he said, before he was wounded he had a violent Gonorrhoea, which nevertheless was perfectly cured. I therefore advis'd him to try the Remedies for the Pox; and having first Purged and Sweated him, I rubbed him with Mercurial Ointment, which raised Salivation; and after the third day of his Salivation, those Contractions and Convulsions ceased, and the Patient was never troubled more with that disease.

Ozias Ay-
mar, apud
Riverium,
obs. 10.

VII. In a *Tetanus* and other Convulsions of the neck, *Rondeletius*, l. 1. meth. c. 37. says, That a vein should be opened, which is seen stand out in the first vertebra of the Neck. ¶ *Mercatus*, l. 1. Pract. c. 15. confirms it, in a Convulsion arising from thick and viscid humours, which being opened, he says, All the phlegmatick humour, that contracted the Muscles, is drawn out by derivation from the Neck: But that vein is obscure, by reason of its smallness, and in dignity gives place to the axillary.

Bartholinus,
cent. 4. lib. 2.
33.

VIII. As to what concerns the way of Cure in general, to be used for these strange Convulsions, it will not be easie either to assign Remedies equal to these Herculean Diseases, or a method of cure that is certain and confirmed by frequent experience; for besides that these cases seldom occur, we may moreover observe, that the self-same Medicines, which did this Patient good at this time, will doe another, or the same at another time, no good at all. The reason whereof seems to be, by reason the cause of the disease consists in the discries of the nutritious juice, which liquor is not always perverted one and the same way; but it gives a different sort of morbid disposition out of the manifold combinations of Salts and Sulphurs, and now and then it changes it. Wherefore in such most grievous affections, not every common Medicine in an Apothecary's Shop must be used, but *Magistralia*, and things proper for the occasion, must be prescribed, according to the appearances of these strange Symptoms. A gentle Vomit, Purging and Bleeding, may first be celebrated; and may be repeated several times, as there shall seem occasion. And as for Specificks and Medicines appropriate to such cases, seeing the chief Indication is to amend the crass of the Nervous Juice, we may try several things, and search out their Virtues by their effects, therefore it is lawfull to try, what remedies endued with a Volatile or Armoniack Salt, can doe. To this purpose, Spirit and Salt of Hartshorn, Blood, Smoak, Flowers and Spirits of *Sal Armoniack* may be used. When these things doe no good, we may come to Chalybeates, Tinctures, and Solutions of Coral and Antimony may be given. Which sort of Medicines must be given in such a dose and form, and so often, as that they may make an alteration in all the blood and Nervous Juice. Moreover, if such

Willis, Pa-
tholog. Cere-
bri, c. 9.

such things have no success, we must proceed to Alexipharmacks, which are good against the poison and malignity communicated to the humours. It is very probable, Medicines that are good for people bit by a Viper or mad Dog, of such as are taken inwardly against Banes and Poisons, may also be of use in the above-said Convulsions. See also the method of Gr. Horstius in his Tract de morbo convulsivo epidemio. ¶ Add to these things made of Cinnabar, whose efficacy Hofman extolls, in his Clavis Schraderiana, against the Epilepsie, and all grievous diseases of the brain and nervous kind, p. 291. &c. where is the description of the Cephalick Specifick of D. Joh. Michael, p. 293. Wedelius in Pharmac. &c.

IX. Gasper de Roulla lay contracted in his bed a whole year, but the last five Months of the year wholly immovable, he could not move a foot, head or arm, nor any thing else: for beside his great pain, his limbs were as stiff as a stone, and it was mid-Winter. It is well known I cured him in forty days, to the astonishment of all that saw him. I thus cured him; I abstained from all Ointments, by the use whereof especially, when his body was not purged before as it should be, the disease came to such an height. I let him blood thrice, although with extreme difficulty, because his arms were contracted, nor could he stretch them out: for his neck, legs, back and arms were as stiff as a stone or stick. While I had him in cure he often despaired of health, so that he was willing I should desist from the cure, for the first 25 days he found not the least relief. He was cured by the Marshal's cure, but as I said before, being thrice let blood, not onely by reason of the greatness of the disease, but because I guessed from his course of life, and the disease it self, that his whole mass of blood was corrupted. Nor did my judgment in this thing fail me at all, for all the blood that came from him was corrupt. His neck stood awry, as a remainder of so great a Disease.

Cardanus.

X. Whenever a particular Convulsion has its rise from a puncture of a Nerve or tendon, as it sometime happens, either through the Chirurgion's unskilfulness, precipitancy, misfortune, or disturbance of his mind, while he is letting blood, then, as soon as can be, warm Oil of Turpentine, with rectified Spirit of Wine must be put into the wound, as Paræus Chirurg. l. 9. c. 38. writes, was done with good success to Charles the Ninth King of France. ¶ My Wife underwent the like misfortune in the year 1669, although a very skilfull Chirurgion let her blood; for forcing his Lancet too deep into the median vein, he prickt the tendon also that lay under it; in a few days after a stiffness and inability to motion in her arm followed, hereupon a contraction, and knot, or a Ganglion. By some bodies advice, to which I agreed, she received the blood of a Horse, which dropped from a Vein opened in his Neck upon her Arm, whereupon, in a little time, she was able to stretch out her Arm. The remaining Knot was dissolved by applying a Plaster of Gum Elemi. See the Affections of the Nerves, Book 12.

XI. A Boy from his birth held his head towards his left shoulder, because one of the second pair of Muscles, or that Ligament which bends the head and neck forwards, was too short or crooked, which ill-favoured figure of his immovable transverse-head, not being reduced to its natural state by any means, it was agreed that G. Straten should cut that tough band athwart, which twined the head so much upon the shoulder. He began the Cure with a potential Caustick, then he directed his knife above the Collar-bone, from the Ear to the Throat, but either slower, because of the toughness of the Scab, or more timorously, because of the nearness of the Jugular Veins and Arteries, than the nature of that tendon and the Nerves required; which therefore being hurt rather by pricking than cutting, a violent Convulsion of the Neck, Face and

Hands presently followed, which, notwithstanding, immediately ceased, when he forced his knife deeper in, and more courageously cut all the Muscle that was in fault: The cutting whereof presently restored the perfect use of an erect figure to the head, and the liberty of moving it self every way: Which nevertheless, lest he should abuse, the Head was swathed about every way with rollers, which, when the wound was healed, being removed, that inveterate inclination to the affected side did remain for some while; so difficult it is to correct long Custome. Whoever therefore hereafter you be, that shall put your self on so doubtful and hazardous an enterprize, do not despair, but what has been once done may be done again; but know, that three things especially should be avoided, and 1. That you raise not a Scab on the skin, which is so far from easing the pain, that it rather hinders the sight, and the knife from cutting. 2. Lest by rash cutting you rather kill than cure your Patient. 3. You must endeavour not at another time, and by turns, but altogether and at once, yet cautiously to cut the whole Muscle, on which lies the main stress of the Cure. Which Animadversion certainly, as it will be a credit to the Chirurgion, so it will be of no small benefit to the Patient.

XII. A Boy five years-old had enjoyed his health very well till he was four; about the beginning of the fifth he began to grow ill, with decay of strength and innate heat, at length a lingering Fever, and a swelling in his belly took him, which were followed with contraction of his Arms; but of his Feet especially, so that he could neither stand nor goe any more. I supposing that Worms were the cause of this change, took Riverius his way of cure, cent. 1. obs. 16. to kill them, which I did with good success, and at one time I brought nigh thirty away; and the days following, but at several times, I brought away above forty, so that the Boy could in a short time after stand and walk.

XIII. The Nerves of a Man's Belly are seldom contracted; yet more frequently than some Physicians take notice, believing that all pain in the belly is caused either by sharp choler, or by wind distending the Gut-Colon: But the unequal distention of the belly, and the strait contraction of the rigid Muscles, do clearly enough argue, that more than the Guts do suffer. A Matron had gathered in her cold and moist stomach plenty of crude phlegm, which, although Medicines carried it off, insinuated it self by degrees into those sensible Nerves, which the Spinal Marrow disperses, both through the Membrane encompassing the belly, and through the Muscles lying next upon it. Which being beset with this crude matter, a remarkable Convulsion of her Belly did torment her, especially if she were with child, and at night. Which pain of hers notwithstanding scarce ever left her, till the cause were purged as it ought by Mechoacan root, or the sharp Vapour thereof, and the wind that oppressed her heart were dissolved, either by Mithridate given her to drink in the evening, or by giving her a Glyster betimes before her torment came. Which way of cure evinces, that this Convulsion had its original from crude and flatulent phlegm.

XIV. One, after he had taken the fume of molten Tin at his mouth and nostrils, was suddenly taken with an Opisthotonos, and then with a most grievous Tetanus, so that he could neither open his mouth nor swallow any thing. D. Brambachius orders Palmarius his Cordial Water to be forced down, but his throat denies it passage; He also prescribes Clysters, he orders fumes of Sulphur (thinking it an Alexipharmack for Quicksilver) and Inunctions for the neck of proper things; but all in vain, for he died in twenty hours. ¶ So a certain Goldsmith, as he was gilding silver Corslets, and did not take care, as he ought to have done, of the fume, was taken with a shaking in all his Limbs, and was per-

feably

Willis, l. 1. c. 9.

Tulpius, de
4. c. 37.

Melchior.
Fries, in
cur. an. 72.
obs. 63.

Tulpius, obs.
22. l. 3.

Ph. Salmuth
cent. 3. obs.
39.

feebly restored onely by the use of Stapedian Treacle-Water, having tried other things in vain.

Medicines especially made use of by eminent Physicians.

1. In a Convulsion caused by a wound in the head, this is a most excellent Remedy; Take Oil of Snails, Worms, *Sesamum*, each 1 ounce and an half, Fat of a Wether, a Fox, each 1 ounce, Spirit of Juniper Wine 4 ounces. Mix them and stir them upon the coals, till the Spirit be wasted; then add Oil of Chamæmil, Linseed, each 2 drachms, Oil of Amber 1 drachm. Mix them, make an Unguent, wherewith anoint the neck. ¶ It is very good to hold the bone of a Pheasant's wing a while in the hand on that side, where the Convulsion is.

Joh. Agricola.

2. Castor is the most secure, ready and effectual Remedy of all. ¶ Goat's-piss also drunk with water fasting is very good. ¶ Also if you take equal parts of Castor, White-Pepper, and Parsly, and beat them together, and take them in a Spoonfull of Honey, and two or three spoonfulls of Water fasting. It is an excellent remedy for them that have the Convulsion backwards, and has been tried by often experience.

Donat. ab Altomari.

Jul. Cels. Claudinus.

3. In a Convulsion from repletion, a drachm or two of *Confectio Anacardina* is commended above all other things, if a Fever be to be raised. ¶ Take a fat live Goose, draw her, let a Cat cut small (some add an Eel also) old Bacon, Myrrhe, Time, Elder and Capital herbs be sowed in her belly, then let her be roasted; and let the second fat that drops be kept for an Ointment.

Crato.

4. This Unguent is good for the Cramp; Take of fresh Goose-grease 4 ounces, Oil of Cloves half a scruple, of Cinnamon 5 grains. Mix them.

Claud. Deodatus.

5. Oil or Spirit of Turpentine applied both inward and outward, takes away all Cramps and Convulsions, with which the Spine, the Navel, and the other parts affected must be anointed. ¶ Water-Lily with red and white flowers, dried in the shade, and hung on the bed, or the wall, in a moment of time cures all Convulsions, as *Carichterius* testifies.

Roderic. a Fonfeca.

6. Take old Treacle, Conserve of Rue each 2 drachms, Oil of Box 10 grains. Make an Electuary; The dose is a small Pill twice a day. It is a very profitable Medicine, which has a Specifick quality; and Oil of Box has a great prerogative in this disease; yea, and you may anoint the beginning of the Spine, the Temples and the Wrist with the same Oil.

Kircherus.

7. I learned of an excellent Swimmer, that Beetles were admirable good for Cramps and Convulsions, who always anointed his nervous parts with Oil of Beetles.

Berch. Penotus.

8. Take of Oil of Amber half an ounce, Mucilage of Briony what is sufficient, Oil of Cloves 6 grains. Mix them, anoint the place, with the root of its Nerve, and it will presently be dissolved, repeat it, and presently wrap the part in a Wether's Skin new slain.

Sennertus.

9. Among Topical Medicines, Oil or Balsam of Galbanum is an excellent one. ¶ A Weezle roasted in the belly of a Goose, as the Cat was, is good. ¶ Sulphureous Bathes are good. ¶ This Electuary is highly commended; Take of Castor, *Sagapenum*, *Opoponax* each 1 drachm, *Succus Cyreniacus* 1 drachm and an half, *Acorus*, *Scordium*, each 2 drachms, three Peppers, *Schænanth*, *Caroway*, each 2 drachms, *Asarum*, a roasted Squill, each 1 drachm, Juice of *Stachas Arabica* 1 ounce, Honey what is sufficient, let, what ought, be beaten, and mixt with Honey of Rosemary. Make an Electuary. The dose is half a drachm in Mede.

10. The following Powder leaves a wonderfull effect; Take of the Root of Swallow-wort, Devils-bit,

Elecampane, *Pœony*, *Mace*, *Cloves*, each 1 drachm and an half, *Bay-berries* half a drachm, *Rosemary-flowers*, *Sage*, *Mother of Time* each 15 grains, *Spec. Pleres archon*, *Diamoschi dulcis*, *Diambr.* each half a Scruple. Make a Powder. The dose 1 drachm, with Water of *Pœony*, *Black Cherries* each 1 ounce and an half.

August. Thonerus.

11. For a Convulsion arising from the Head-ach, I applied this wonderfull, efficacious and most useful Ointment, often tried by me in such cases, which I have ever found sure in a *Tetanus*, and in contractions of the Nerves; Take of old Oil 4 pounds, *Betony*, *Elder*, *Sage*, each 1 handfull, *Roots of Marshmallow*, *Acorus Aristolochia rotunda*, each 1 ounce, *Earth-worms* washed in Wine 3 ounces, *Opoponax*, *Castor*, each 3 drachms, *Flowers of Rosemary Stachas*, each 1 Pugil, *Red-Wine* half a pound, *Juice of Sage*, *Betony*, each 2 ounces. Let all boil to the consumption of the Wine and Juices. Strain and press it hard. Add of Fat of a Bull, a Duck, each 2 ounces, the Marrow of a Calf's-Leg 4 ounces, *Mucilage of Fœnugreek* 3 ounces, of both the *Stachas's*, *Nutmeg*, *Cloves*, each 2 drachms, Wax what is sufficient. Mix them, make an Unguent, which I ordered to be applied hot over the Neck.

Franc. Valeriola.

12. This is an incomparable Cataplasim; Take of Root of Marshmallow, *Bryony* fresh, each 2 ounces, *Mandrake* 1 ounce, *Leaves of Green Henbane*, *Mallows*, each 1 handfull. Boil them in Milk. To them mixed add of Linseed, *Psyllium*, and Quince-seed, each half an ounce, the Fat of a Dog, a Goose, each 1 ounce, Oil of sweet Almonds, fresh-Butter, each half an ounce, *Bay-berries* 2 drachms, *Saffron* half a drachm. Make a Cataplasim.

Arnold. Weikardus.

Cordis Affectus, or, Diseases of the Heart.

(See Palpitation, Book 14. Swooning, Book 17. and Book 19. Cordials.)

The Contents.

In the Cure of a hot disease hot Medicines are convenient. I. The Cure of Worms in the Heart. II. A Medicine.

I. **A**Lthough in cold Diseases of the Heart, Hot things are absolutely convenient; yet in hot Diseases simply Cold things are no way expedient, but things remissly hot. The reason is, because when we would change the hot complexion, we are not content with coolers, by reason the substance of the Heart consists of innate heat, which must not be extinguished, but corroborated. And therefore for the present the conservation of strength is principally respected, Because the Heart is the Workhouse of life and heat. Therefore, although in respect of a cold disease, hot things be indicated, nevertheless, in respect of the part affected, moderate, and not excessive Heaters are requisite. And for this reason Cordial Medicines, though they be hot, must never be neglected in Diseases of the heart.

Conciliator Enucleatus. Sed. 196.

II. Without doubt Worms are bred in the heart and in its Caul. This Disease is very familiar to Virgins, and is known by prickings and pains of the heart, and by Worms voided and not voided. Convulsion is the Diagnostick. Common Cordials, whether hot or cold, can doe little or nothing in the Cure. In the beginning, before there be Convulsions, *Beggar-Stone* may doe something, if it be given with

with Salt of Tanſie, or of Dittany of *Crete*, or the common, from 4 grains to 8. The Specifick Cure is ſuch. Let the Worms be firſt purged away with this; Take of Quickſilver purified, and then mor- tified with faſting-spittle, or juice of a Lemon, a- bout a Scruple, Conſerve of Roſes half an ounce, powder of *Benzoin* 2 grains. But if any Man be a- fraid to take this, let him onely infuſe 1 drachm or 2 in cold water over night, and pour it off next morning and drink it; or let him take 2 or 3 ounces of diſtilled-water of Onions, or Garlick: for theſe things, if they expell not the Worms, kill them at leaſt. And when the Worms are voided, if the Convulſion-fits return (which is a moſt certain ſign of a Worm in the heart) let Specifick Extracts be given, as of Garlick, Horſe-radish, Water-Creſſes,

of each 1 Scruple, in ſome Broth or Pottage, where- in Horſe-radish has been ſteeped before. By this method they are quickly cured. If extracts be not at hand, let a like quantity of all the Juices be mixt together, and 2 or 3 ſpoonfulls be taken every morning. And their Salts rightly prepared doe the ſame thing.

Hartmannus
P. Chymicus
c. 111.

*A Medicine eſpecially made uſe of by an eminent
Phyſician.*

Take ſome Juice of Garlick, Horſe-radish, and Water-Creſſes, give it, and the Patient will preſent- ly be cured; Believe one that has experienced it, it is true.

A GUIDE TO The Practical Physician.

BOOK IV.

Of Diseases beginning with the Letter D.

Deglutitio læsa, or, *The Swallowing hurt.*

The Contents.

The cure of strange things swallowed, either sticking in the Oesophagus, or get into the Stomach. I.

The Oesophagus freed from obstruction. II.

One that could not swallow, sustained by Injections in at the Mouth. III.

The Cure of it hurt by the ulcerated Jaws. IV.

When a Pipe may be used to get down Food, that cannot otherwise pass. V.

I. **W**HAT things contrary to nature are swallowed, either come into the Stomach, or stick in the Oesophagus. This is an Instance of the former. A

Maid eighteen years old, as she was eating, swallowed a brass Pin, with the Point downwards, which sticking in the Oesophagus, created cruel Pain. When she had tried several things, and continued a whole year in this Condition, the Pin was by my advice thrust into her Stomach with a Shoemaker's Wax candle, thrusting it gently twice or thrice a day, and anointing it first with Oil of sweet Almonds, which was done without pain, and quickly after it got into the Stomach: It has given no more trouble as yet.

A Woman, as she was cheapning goods, held a Farthing in her mouth, and having forgot it, as she was eating a peice of Cake that was offered her, she swallowed it before she was aware. Then she had a dull pain and Copperish taste in her stomach. I being consulted, because for some reasons I would not give her a Vomit, ordered her constantly to use

slippery and fat things, and gave her from six to nine drops of rectified Spirit of Salt twice a day, so that by little and little the ill taste was abated, and in a while the sad sensation ceased. Here it happened, as Theophrastus, in his Book of Fire, speaks, pag. 142. *That the Stomach melts money.* And acid Spirits are not so hurtfull to the Stomach; but they lessen the weight of Brass and Silver, by getting out their Vitriol, so that afterwards they may pass the Guts more easily.

A Boy of twelve years of age swallowed an Imperial Spanish Half-crown, that he had in his mouth, which stuck in his throat, the Chirurgeon tried as much as he could to get it out, but all in vain; so that he was forced to drive it into his Stomach; which being done not without much trouble, care was taken of the Oesophagus, which was pained and almost wounded, by giving Traumaticks and Paregoricks. The Patient in the mean time, as soon as the money was received into his Stomach, was very well, onely he had a pain in his throat, and swallowed with difficulty; nor has he found any trouble to this day, the Silver having remained now nine years fixt in its place.

A Boy three years old, when he had put two Links of a brass Chain an inch long in his mouth, swallowed them unawares, and as they stuck in his throat he roared out for pain; but as soon as they were got into his stomach, he seemed to all nothing, but ate and drank heartily. His carefull Parents searched the excrements every day for several weeks, but in vain; for they found nothing, so they certainly concluded, they were by little and little wasted in the stomach. But the excrements were never observed to recede from their natural state. The Boy lives now very well in health.

A Boy five years old, when he had swallowed a leaden Seal, that uses to be fastned to Cloth, was troubled with grievous pain till it got into his stomach;

G. Wolf.
Wedelius,
Mifc. cur.
an. 1672.
obf. 141.

mach; and was cured by giving him distilled Vinegar, whereas at first his Parents were afraid of his life; yet nothing of so broad and thick a piece could be observed to be voided; but he is now very well. And it was the best advice to give him distilled Vinegar, because by dissolving the body of Saturn it turned it into Sugar.

Riverius,
cent. 3.
obf. 71.

II. One being very hungry, was eating a boiled Hog's-foot, and a piece of it with the bone stuck in his throat for two days. A Chirurgion turned a long piece of iron Wire like a Hook at the end, put it down his throat, by the Hook whereof the piece of the foot was caught, and with main strength drawn out of his throat.

Idem, cent. 3.
obf. 72.

III. A man being taken with a true Quinsy, had the upper orifice of his stomach so close shut with the Inflammation, that he could swallow nothing at all. While Remedies were using, that he might be able to bear plentiful Bloud-letting and other Remedies, for reparation of strength a Catheter was put into the Oesophagus, and a Syringe fitted to it, by which Broths were got into his stomach, and Medicines also, by help whereof he was cured of his Disease.

IV. One asked my advice, saying he was troubled with Wolves in his Nose. (Flanders calls Snot concrete in the Nostrils, Wolves, which Nurses take out of Children with Pins heads) and moreover, that he had some pain in his Jaws, which reached to the middle of his left Ear, and that he swallowed Wine with pain. I told him, I thought, he had an Ulcer in his Throat, and we must take more care of that than of his Nose; and when I opened his Jaws with a Speculum oris, I observed all his Palate, and great part of the Uvula hugely ulcerated. That the pain of his Ear depended on this, no man, that knows Anatomy, can be ignorant. The Ulcer of his Jaws being first cleansed with Fallopius his Water, and he thinking he was not cured fast enough, D. D. Nollens promised him a most secret Remedy presently, and applied distilled Butter of Antimony. I found this at the first view, because upon the least touch of the Liqueur it turned into a Powder as white as Snow. Truly this hath great virtue in Venereal Ulcers, Rotten Bones, and the like, and cures in a short time, as it here appeared.

Heers,
obf. 28.

V. When Patients cannot swallow, a Pipe must be put down the throat, that they may take some food. But when there is an Inflammation in the part, it is too much irritated; therefore it is my advice, not to use the Pipe but on urgent necessity. I should rather approve that some sort of Pipe might be made which may be put near the throat, and also a clean Bladder full of some nourishing Drink, which may be fastened to the Pipe, and the Bladder squeezed with some violence, as in giving Clysters, that so the Drink may be forced into the Oesophagus. I have seen some restored by this Pipe who have been despaired of as starved. See Angina.

Capivaccini,
us, l. c. 53.

ting, which she had enjoined her self for three days, upon I know not what account.

Pet. Borcl-
lus, obf. 87.
cent. 3.
Bauhini obf.

II. A Girl, near Xeres de Guadiana, twelve years old, fell into a Raving, which, after she had voided Worms, suddenly ceased.

A Medicine especially made use of by an eminent Physician.

I have found by most faithfull experience, that many who could not sleep for Raving, have found benefit by anointing with cold Oil of Violets, and applying an Oxyrrhodinum upon it.

Mercatus;

Dentium affectus, or, Diseases of the Teeth.

The Contents.

- The Tooth-ach must not be cured one way alone. I.
Its Cause usually gives place onely to Purgings. II.
It is often exasperated with hot things. III.
Whether we may use Narcoticks in the Tooth-ach caused by a Vapour? IV.
To ease it, where Causticks and Intericiptions should be applied? V.
A periodical one cured by burning the Vessel that conveys the Humour. VI.
A Tooth-ach that precedes the coming of the genuine Teeth, how it may be cured? VII.
Repellents are not always proper. VIII.
Death upon putting a Narcotick in a rotten aking Tooth. IX.
Cured by opening a Vein in the Palate. X.
The efficacy of opening the Artery of the Antitragus in a violent Tooth-ach. XI.
Cured by cauterizing the Cartilage of the Ear. XII.
The Tooth-ach cured by opening the Saphoena. XIII.
The use of Oil of Vitriol to preserve the Teeth from rottenness. XIV.
With what a rotten Tooth should be stopp'd? XV.
Whether rotten Teeth should be pulled out? XVI.
Whether they may be burnt with a Cautery? XVII.
The Correction of Rottenness. XVIII.
Loose ones must be fastned with Fire. XIX.
Over-long Teeth, that are not fast, may be fastned by cutting off what is superfluous. XX.
They must not be presently drawn. XXI.
Especially in Old men. XXII.
When they fall from Children, the Roots must be preserved. XXIII.
With what Cautions they must be drawn? XXIV.
Whether another can be put in the room of one that is pulled out? XXV.
Death caused by shortning a Tooth. XXVI.
A Fungus growing in the hole of a drawn Tooth, must be rooted out. XXVII.
Medicines.

Delirium, or, Raving.

The Contents.

- Cured by giving Meat. I.
Ceasing upon voiding Worms. II.
A Medicine.

I. MAdam N's Maid fell into a Delirium, so that she knew not what she said. Presently those that were by, thinking she was seized with some very grievous Disease, tried many things. But after she had taken some Meat, she was presently cured: for she confessed it proceeded onely from Fa-

I. THE Teeth ake, either because of a flatulent Spirit inclosed about the Roots of them, which is asswaged by a Decoction of hot Herbs in Wine; also by Treacle dissolved in Wine: Or because of a Defluxion of hot humours, where-with when cold ones are mixt, the pain indeed is not so violent, but has as it were certain intervals, yet it frequently returns. And this medly of humours (as it happens also in the Gout) is the reason, why the most approved Remedies do not so much mitigate as increase the Evil, unless the Physician know well the nature of the humours, whereby the pain is caused, and temper his Medicine according to the present affection. There is also another reason, because in this Disease, as in all others which come of Defluxions, those things that are

Q 2

good

good in the Increase, are good for nothing when the Defluxion is at the height, much less will they be convenient in the beginning. When the unskilfull observe this, their experiments often fail them (except they be Narcoticks, which ever take away pain, but never without hurt either of the part grieved, or of some one near it.)

Crato apud
Scholtizium,
conf. 75.

II. The Tooth-ach exercised me for several days, especially near dinner time, when the Stomach, being empty of meat, draws all the Juices from the rest of the Body on every hand, that can come. To ease it therefore, when I had taken a Purge, as soon as my Stomach was turned, I voided above a pound of Water, and that sincere and pure; so that I lived ten years after free from it. And being informed by this experiment, whoever complained to me afterwards of the Tooth-ach, I persuaded them to neglect those Remedies, People commonly wash their mouths withall, and first of all to take an Hydragogue, which always answered expectation.

Carolus Pi-
so, de collu-
vie serena,
l. 2. c. 3.

III. Medicines designed to cure the Tooth-ach, are most of them hot: but Practice shews that such pain comes from sharp bloud or a hot distillation. Therefore Physicians must go warily to work, lest being deceived by the common opinion, they create more trouble to the Patient by their hot Mouth-waters, than they procure ease of their pain.

Oethaus ap-
ud Schen-
kium.

IV. I think it by no means adviseable to use Narcoticks in the Tooth-ach, for the Vapour is too much congealed and thickned, and by congealing we doe no more, than turn a little ease into a more difficult Disease. But if an intolerable and immense pain torment the Patient, and the Physician be forced to comfort Nature with this sort of Remedy, I advise, that the Narcotick virtue be corrected by Heaters, and that at the same time we have respect both to the Symptome and the Cause, which may very well be done thus; Take of Pellitory of Spain, Pepper, each 1 scruple; Opium, half a scruple; tie them in a Rag; infuse them two or three hours in very sharp Vinegar, and apply them to the tooth. Or, Take of Henbane-seed, Staves-acre, Pellitory of Spain, each 1 scruple; Powder them very fine; Take one scruple of this Powder, and with the strongest Vinegar make it into a Pill, which may be held to the tooth an hours time. It wonderfully lays the pain indeed, and breeds no Intemperature, to speak on; though it were more desirible to take away the pain onely by Disscutients, if it could be done.

Flemus, Ph-
sographicæ,
c. 14.

V. In the upper Jaw an Artery creeps along the Antitragus of the Ear; where it may be burnt, and an astringent Plaster may be applied to this place and to the Temples, to intercept the flux of humours to the Veins: An Artery creeps nigh the Angle in the lower Jaw, and it must be burnt where it beats, or Topicks must be applied when the Teeth ake in the lower Jaw.

Riolanus,
Enchirid.
l. 4. c. 8.

VI. To cure and prevent a periodick Tooth-ach, Spigelius burnt that part of the Anthelix which immediately touches the upper part of the Tragus with good success, and then healed the wound again. By this new Chirurgery, that branch of the Carotid Artery that reaches from the Anthelix of the Ear to the Teeth, is cut athwart, so that the afflux of humours being intercepted, the pain returns no more. The Authoar tried the effect of this Remedy first in himself, and then in others.

Sculctetus,
Arm. Ch. r.
obs. 28.

VII. Those are the Genuine Teeth, which first appear before Pubescency and use of Venery in People; sometimes with cruel torture. A thing which the less observing Physicians neglect, and either pull out some other Teeth, or, persuading themselves that they are troubled with some fault in their humours, choak their Patients with Pills and such sort of Medicines; whenas no more present Remedy could be given the pained Parties, than a light scarification of the Gums upon the last tooth, and

sometimes a piercing of the bone. This very thing I now find true in my self, who in the six and twentieth year of my age, while I write these words, have my two and thirtieth tooth coming. And several Skuls which we meet with in Church yards argue the same, in which the latter teeth yet lye hid as in a Cave, and in some they are just piercing the most tender bone with their tops.

Vesalius, de
hum. corp.
f. 67. l. 1.
c. 2.

VIII. There is need of Caution in Repellents, especially if they be applied to the Jaws: for though if the matter fly back into the tooth, onely repellent Mouth-washes may be used without danger; yet if the matter be more plentifull, so that it possesses the Jaws also, Repellents cannot be applied safely, to the Jaws especially, seeing they may drive the matter inward to the Throat, and so choak the Patient. So Valsæ. de Tarenta relates, how one that was troubled with the Tooth-ach in his Grinders, and with a Swelling in his Jaw, had Oil of Roses and Vinegar applied to it, and fell into a Quinsey, and died.

Sennertus.

IX. A Senatour of Venice, because of the violence of his Tooth-ach, would cast himself a-sleep by putting in some Opiate Oil to the tooth: but instead of Sleep, he committed himself to his brother Death.

Alex. Bene-
dictus, l. 5.
c. 13.

X. Some have made mention of opening the outer Veins of the Palate in Diseases of the Head and Face, Jaws, Throat, Teeth and Mouth. J. à Reham. in Tascie. Med. wrote a History of a Woman, who had endured a bitter Tooth-ach, and she could find no ease in Repellents and other Medicines, she was wonderfully relieved by this Phlebotomy. And (saith he) these Veins are apparent, which yet must be opened after being bled in the Cephalick, and when the matter is digested, and not crude.

Severinus,
Med. Essic.
p. 56.

XI. Small Arteries go from the Carotides into the Auricle, the greatest of which creeps by the Antitragus and Anthelix, and ascending the upper Jaw, supplies every tooth with vital bloud, with which sharp humours flowing thither are often the cause of a most violent Tooth-ach, which I have often seen cured to a Wonder, by artificial cutting that branch in the Anthelix. Which is well observed also by Bauhinus: And Riolanus tells, how he saw a Man in Paris who got a great deal of money by curing that way: And I saw such an one in Gelderland.

Dilem-
breck, Ana.
l. 5. c. 13.

XII. Onely the Cartilage which is extended athwart the Ear, being cauterized, is wont to remove the Tooth-ach.

Lafrancus.

XIII. The Wife of N. of a sanguine complexion, and ruddy countenance, being troubled with a violent Tooth-ach, by the advice of a Physician of vlm, got her self let bloud in the foot, as the fate in hot water, suffering the bloud to run till she fainted, and she found ease.

August.
Thonerus,
obs. 5. l. 2.

XIV. Among all things which preserve the Teeth from Rottenness, Oil of Vitriol whitens the most, and is commended, if it be mixt with Water, because it hurts not the pure and sound flesh, but takes away onely the putrefied. Yet they find fault with it, who are ignorant of the true use of it: but they that know how to use it, give it successfully in great Diseases, though not in all; for a drop or two mixt with Sugar or Honey of Roses cleanses the teeth admirably, and helps putrid Gums, with Ulcers in the mouth.

Crato, conf.
75.

XV. A piece of meat, especially if it be sweet, if it be kept in a hollow tooth, putrefies, and so causes pain, or encreases the sink and erosion. Wherefore you will find it best both from reason and experience to fill a hollow tooth, lest ought get in, which may touch that sensible part. It may be filled with Mastick chewed till it be soft: for if hard things be put in, they will cause pain. Some fill their teeth with Wax; but in my judgment they doe ill, because it hath an emollient faculty, especially if it be new. But if we would use it, we must mix Salt or Alum; or something else that dries and

and binds, especially if the Tooth water; or white Wax rather, because it is drier, and hath an adstringent quality from its preparation; or, red Wax, which, by reason of the Cinnaber, prepares the teeth, so that they may be either more easily pulled out or broken: yet green Wax is more laudable; which dries vehemently because of the Verdigrease, Afterwards you must use other driers; lest such things as cleanse the teeth do at length fret them with their acrimony. If there be Putrefaction, add Myrrh, if Stink, Musk or Cotton wherein Musk is kept: except in such as are subject to the Head-ach, or Vertigo: because they are hurt by Smells.

Rondeletius,
l. 1. c. 83.

XVI. Ancient Physicians do not well agree about pulling out a tooth, although the most think a faulty and corrupt one should be pulled out. *Erasistratus* thinks they ought not upon a slight occasion be pulled out, and he produces this as a testimony for his opinion; Among the *Low-Dutch*, in *Apollo's Temple*, a leaden pair of Pliers to draw teeth was hung up, to intimate, that a tooth should not be pulled out, unless it were loose, so as it might be pulled out with a leaden pair of Pincers, that is, without violence. Which if in any part of it be rotten or faulty, what is faulty may be scraped off, and what is sound may be left. And, indeed, it must not lightly be pulled out, unless it be corrupt, all rotten and loose, if there be an Inflammation of the Nerve under it, on which danger may depend: for when the tooth is pulled out, the Nerve is free, and not pressed, but transpires and admits convenient Remedies. In corruption, you must consider how much it is, for sometime it is superficial and onely near the end; then some part of it may be filed off, while the root is sound. ¶ *Valescius de Taranta* doth scarce allow of drawing a tooth; first, because of chewing; secondly, because when one is pulled out, the defluxion goes to another, and so one tooth may be pulled out after another till a man have not a tooth in his head. But although he may be allowed his way in the Tooth-ach from a defluxion, where the matter flows by vessels common to several teeth: yet in corrupt teeth, and especially when the matter that runs out of the rotten teeth causes a Swelling or Ulcer in the Jaw, there is no other way of cure, but to draw the tooth: for then there is no fear, lest the adjoining tooth should be corrupted, because such corrosion comes not from a fresh defluxion, but from one that is past long ago.

Hollerius,
Perioche 5.

Sennertus.

XVII. *Hollerius* allows of Cauteries; *Sennertus* thinks the use of them scarce safe; because of the exquisite sense of the Nerves, fearing lest other parts should sympathize. Yet I could never observe any harm follow: the onely fear is, lest the parts adjoining, as the Lips, &c. should be burnt. With this Precaution a red hot Iron may be put in the hole safely: Let the Patient set his foot upon the Chirurgion's, and let him press it, that the Chirurgion may take away his Iron, if perchance it should hurt him.

Petrus Pa-
chequus,
Obs. 65.

XVIII. We see multitudes in this Climate tormented with the Tooth-ach, because of corroded and hollow teeth. I fill the hollow of the teeth with Turpentine, and then apply an actual Cautey, with very good success.

XIX. An Infirmary and looseness of teeth happens to many from a sharp distillation. All vulgar Physicians treat this evil onely with styptick things, which scarce doe any good. The onely Remedy is Fire, indicated by *Hippocrates*, l. de aff. n. 5. and by *Rhazes*, who burn the roots of the teeth with a hot Iron. *Gariopontus*, with a Copper Nail. What I see no man else doe, I have tried in two hundred, both curing the Tooth-ach and in fastning loose teeth. I will here shew the fashion of the Iron, which is fastned to a long handle, and is half an inch broad, and two inches long, but bent, so as it may be fitted exactly to the Convexity of the teeth. But it must be observed, that this Chirurgery may very opportunely be tried, when the parts first begin to languish,

but when the teeth are loosened from their roots, Burning will scarce doe any good.

Severinus,
Med. effe.
Pag. 250.

XX. Teeth, as the rest of the Bones, consist of small Fibres, but very hard and compact ones, running length-ways. By the insensible and extreme small Interstices of these small Fibres the most subtile particles of Aliment run from top to bottom, being carried by the Arteries to the roots of the teeth. If upon any occasion this alimentary Juice be made thinner, and its particles be carried with a greater impetuosity than they ought, they do not easily stick, but pass their bounds; and so when what is abated of the thickness of the tooth by continual effluvia, is not made up, the tooth must of necessity grow more slender, and when the Aliment runs out farther, according to the duct of the Fibres, the tooth grows in length. Therefore, to prevent this Slenderness of the tooth, the best Remedy is, to shorten the tooth with a File, so, when it is made shorter, the Aliment which cannot run beyond the tooth, being forced into a shorter space, encreases the thickness of the tooth. So Husbandmen use to lop the Branches of Trees that the Trunk may become thicker and stronger, the nutritious juice being contained within it self, which was distributed into the Boughs that were cut off. It seems as if this too great excursion of Aliment in the teeth might happen not onely because of its thinness and agitation of parts whereof it consists; but also through the laxity of Fibres, whereof the tooth consists; which may happen, if while the Aliment flows too sparingly, all the Fibres become more slender; or the same Aliment may be corrupted either through the fault of the part, or of the affluent humours.

Franc. Bayle,
Problemi. 57.

XXI. If teeth be loosened by a fall or blow, they must not be drawn, but restored, and tied to those that are fast, for in time they will be fastened in their holes: As I experienced in *Antonius de la Rue*, a Tailor, who had his Jaw broke with the Hilt of a Sword, and three of his teeth loosened, and well-nigh beaten out of their holes; when his Jaw was set, his teeth were restored to their places, and fastened with a double thred and a plaster to the next; I fed him with broths and spoon-meats; I made him astringent Gargarisms of Cypress-nuts, Myrtles and a little Alum boiled in Vinegar and Water, and ordered him to wash his mouth frequently; and I so ordered the matter, that, in a short time he could chew as Well with these teeth as with any of the rest.

Parvus,
l. 23. c. 67.

XXII. Two died of drawing a tooth, through much Bleeding: but one of them was decrepit: in the other there was a large Vessel at the root of the tooth, and a great Breach. ¶ As a Tooth-drawer was drawing a tooth from an old Man in the Market-place at *Bononia*, the man died suddenly.

Cardan. de
casib. &
sign. morb.
p. 155.
Forest. l. 14.
obs. 4.

XXIII. Teeth in Children, whether they fall out of themselves, or by violence, so the roots remain, grow again of themselves. Therefore we must have a care, when Children have broken their teeth by a fall or a blow, that we pull not out the part that remains; but the root it self must be as carefully preserved as may be: for all the hope of the tooth's coming again depends upon it, as the seed, and when it is pulled out by the root, teeth seldom or never come again.

Columbus,
l. 1. c. 10.

XXIV. We must have a care that we draw not a tooth at the time of a defluxion, head-ach, swelling of the Gums, or when they ake violently. And the Chirurgion must be admonished, that he pull it not out violently and forcibly, that is, at one pull, lest a great concussion of the Brain or breaking of the Jaw be occasioned, which is attended with a great Hemorrhage, or Fever, and sometimes Death.

Riverius,
praet. l. 6.
c. 1.

XXV. Some Physicians would persuade a Man, that an artificial tooth may be put in the room of one that is pulled out, and that it will stick as fast as any other tooth, that it will be clothed with the

flesh

flesh of the Gums, and will serve to chew with. But he that considers, the teeth have Life, that they receive Veins, Arteries and Nerves, that they are sensible and ake, and are fastened with ligaments; will never affirm it.

Riolanus,
Euchir.
l. 4. c. 8.

XXVI. A certain Nun, when she had got a tooth which was longer than any of the rest to be cut short, thereby to avoid the deformity, presently fell down dead in a Convulsion and Epilepsie: But a Nerve appeared in that part where the tooth was cut off.

Casp. Bar-
thol. Inst.
Anatom.

XXVII. A bony fungus sometimes grows out of the hole of a drawn tooth, so big, that it fills the mouth, and at last choaks a Man, unless prevented by cutting it out, and burning it.

Riolanus,
Euchir.
p. 309.

Medicines especially made use of by eminent Physicians.

I. For Rottenness of the teeth.

1. If the Corrosion come of Worms, a Medicine is made of Leek-seeds mixt with Wax, receiving the fume into the mouth.

Rod. à Fon-
teca.

2. This is a most excellent Remedy; Take of the Roots of Mastick-tree, Cinquefoil, sharp Dock, each 1 drachm; boil them in very sharp Vinegar to a third. Add to it strained of Salt half a drachm. Wash the teeth with it.

Petr. For-
estus.

3. A tooth taken out of a dead man's Jaw, if you touch a rotten tooth often with the root of it, will cause the tooth to fall out piece meal in a few days.

Hartman.

4. Take of Myrrh, Aloe Epatica, each 3 ounces; Henbane-seed, 2 ounces and a half; Nettle-seed, 1 ounce; Saffron, 2 ounces; Nutmeg, 1 ounce. Mix them; make a Powder; pour on it some Spirit of Wine; let it stand in a hot place for some days: then distill it by an Alembick, in which dissolve of Balsam of Sulphur a twelfth part, and you will have as excellent an Elixir as ever was used; where-with the Gums must once a-day be anointed. It is a most certain preservative of the teeth against Rottenness.

Joh. Popp-
us.

5. For the Hollowness of the teeth, if it proceed from a hot cause Camphire is excellent good, whether it be applied as a Plaster, or the hollow tooth be stopt with it.

Eustach.
Rus.

6. Take of Powder of Myrrh 2 scruples, Gum Juniper 1 scruple, Alume half a scruple, with a sufficient quantity of Honey; make it into a liniment, with which the rotten and hollow teeth must be rubbed every day. ¶ To get out hollow teeth some commend the fat and powder of green Frogs that live upon Trees, if it be rubbed on the teeth.

Dn. Sen-
netus.

II. For the Falling of them.

A tooth of a Man, who died through decay of strength, nor taken off by a violent death or an acute disease, causeth any tooth in a living Man to wither and fall out onely by touching it.

Van Hel-
mont.

III. For the Tooth-ach.

1. Take of Gum Tragacanth 2 drachms, Hyssop half an ounce, Pellitory of the Wall 3 ounces, mixt with Honey and Salt, and burnt to a Coal in a Pot, Pepper 4 ounces; beat them very fine, and pass them through a Sieve, and then use it; which if you doe, the teeth will neither ake nor grow loose, nor will the gums be inflamed or bleed, nor will Caruncles grow thereon, nor will they be troubled with defluxions. And, besides, the breath will be sweet and the teeth clean.

Aquarius.

2. Take of Juice of white Bryony-berries one pound and a half, Bark of the root of a Mulberry-tree an ounce and a half; boil half away. It must be held hot in the mouth; give it 7 days one after another. He that uses it shall never be troubled with the Tooth-ach. ¶ Take the Skin of an Adder, burn it and beat it, make it up with Oil about as thick as Honey; or, take the Skin it self unburnt,

rub the teeth therewith, and they will fall out.

¶ This is Andromachus his Medicine which asswages the Tooth-ach within an hour: Take of Pepper, Pellitory of Spain, Juice of Spurge, Galbanum, each equal parts; put it in the hollow tooth.

Aetius.

3. If the teeth be touched with the Radius of a Sea-parsnip, and the gums scarified, the Tooth-ach quickly ceases.

Jul. Caesar
Baricellus.

4. Some rub the teeth of Scorbutick persons with the branch of Willow, and set it in the smoak of the Chimney: and as the branch dries the teeth are cured. ¶ I have tried several Medicines, and could onely find benefit from Alume, which I melted in a Saucer and powdered, and with Nutmeg and a sufficient quantity of Honey, made it up into the form of a Liniment, wherewith now and then I anointed the aking tooth, and with good success, for the Tooth-ach ceased, and I rested well.

¶ A Pill of Philonium Romanum put in the tooth, having first washed the mouth with Lapis Prunellæ dissolved, never failed me.

Tho. Bartho-
linus.

5. Paulus writes that the Tooth-ach is effectually cured with a Decoction of Fern-root in very strong Vinegar. ¶ This is certainly experienced, that the root of Self-heal dried and rubbed on the Gums of the aking teeth till they bleed, cures the Tooth-ach.

Alex. Bene-
dictus.

6. One could find no ease by any remedy, till he put Betony in his Nose, and then he was cured. ¶ Shepherds-purse bruised, and the quantity of a Hazle-nut put in the ears, is a good and experienced remedy. Garlick also bruised, with a little Salt, and applied to the Thumbs, raises Blisters, out of which Water runs, whereby the Defluxion is derived from the teeth, and the Tooth-ach taken away.

¶ A Plaster of Burgundy Pitch with Powder of Nutmeg applied to the Temporal Artery hath cured several. ¶ Knives touched with a Load-stone, cure the Pains of teeth, ears and eyes, onely by the Touch.

Petrus Bo-
rellus.

7. Take Mastick-seeds and bruise them; put them in a Rag, and hold it to the inside of the teeth: It hath a wonderfull virtue of drawing out viscous humours, asswaging and at length of curing the Tooth-ach.

J. Theod.
de Bry.

8. In curing the Tooth-ach nothing is better than Oil of Turpentine, with Powder of Camphire; the Oil whereof also is very effectual.

Jul. Caf.
Claudinus.

9. Take some Pellitory of Spain powdered, half as much powder of Cloves, steep them in Spirit of Wine; wet a folded Rag in it, and apply it to the aking tooth. ¶ To preserve the teeth, the inner rind of Barbary steeped in Water, and to wash the mouth therein is very good in the morning. ¶ Also Spirit of Vitriol mixt with Water is very much commended, because it preserves the teeth from putrefaction, and whitens them. For a drop or two of Spirit of Vitriol mixt with Sugar or Honey of Roses cleanseth the teeth wonderfully, and helps putrid teeth and gums, and Ulcers of the mouth.

Joh. Crato.

10. Take Oil of Cloves half an ounce, dissolve in it of Camphire half a drachm, then add some Spirit of Turpentine four times rectified; mix them: A drop or two with a little Cotton put in the hollow tooth presently stops the Pain.

Osw. Croll-
us, Basichym.

11. The Salt of the fruit of the Fir-tree (which is called the first Stone of the Jovial-tree) is good for the Tooth-ach, if it be dissolved in a little Vinegar, and held a while in the mouth. ¶ Take of Wild-poppy, Hen-bane, Sweet-williams, Baum, each a like quantity; make of them a Crystal Salt; put a few grains of it in a hollow tooth. It is a certain Remedy.

Mich. Crug-
ner.

12. Take dried Hops, rub them a little, put them in strong Vinegar; boil them a little and strain them. Wash the mouth and gums with the Liqueur; for it is wonderfull.

Tob. Dorn-
crellius.

13. The Quintessence of Coloquintida is a great Secret in curing and easing the Tooth-ach. The Dose is half

Petr. Joh. Faber. is half a drachm or a drachm in some Broth or Syrup. ¶ The chymical Salt of Lizards cures the Tooth-ach admirably.

14. A Turnip roasted in the ashes, and applied hot behind the Ears is held for a Secret. Certainly it repels violently and cures the Tooth-ach effectually, as I have had experience, and can testify also of others.

15. Take the leg or thigh of a Toad, cleanse it from the flesh. Rub the aking teeth with the bone, and the Pain ceases in a moment.

16. The Tooth-ach vanishes when the *Archæus* is mortified, which is done by sharp Remedies, as the root of Pellitory of Spain, and of the Nettle with the red flower; the white substance whereof being scraped and applied to the tooth wonderfully mortifies its raging.

17. The Secret of the King of Poland. In a clear day powder a Load-stone, and calcine it in a glazed Pot till it wax green; Of this, with Meal, Wine and Gum Tragacanth, make Lozenges to put into the teeth, which in a moment stop their aking. ¶ Take a clove of Garlick, a little Treacle, a clean Cobweb. Mix them; make a Plaster; apply it for some hours to the median Vein, on that side the teeth ake on: the most violent Pain ceaseth, and returns not in some years.

18. If some Oil of Box in Cotton-wooll be put with a Probe into a hollow tooth, it presently takes away Pain.

19. Fill a Womans Thimble full of Salt of Ashe, and apply it to the temporal Arteries where you find them beat; in a short time it makes a knot in the Artery, whereby the flux is intercepted.

IV. For Looseness of teeth.

1. I have had frequent experience of this: Take Pomegranate flowers, unripe Galls, dried Roses and Spurge, with a little Alum; boil them in Vinegar and harsh Wine, till a third only remain. Hold the Decoction hot a long time in the mouth.

2. Take of Acorns 1 drachm, Galls half a drachm, burnt Alum, *Acacia*, each 2 scruples; Red-rose flowers 1 handful: Boil them in a quart of Red-wine: Let the teeth be often washed with this Decoction.

3. Pimpernel-root chewed fastens the teeth wonderfully.

V. For Black, Foul and Bleeding Teeth.

1. There is not a better remedy than a Pumice-stone red hot and quenched in White-wine twice, and the third time left till it be cold, and then without any farther quenching beaten and washed; If the teeth be rubbed therewith it makes them exceeding white.

2. Take of dried Rosemary powdered, White-bread powdered, each 2 drachms; red Coral prepared 1 drachm, Alabaster half a drachm; mix them; make a Powder, with which rub the teeth every day, and wash the mouth with Rosemary-water. In a short time you will find the admirable efficacy.

VI. For Drawing of teeth.

1. Dock-root heat in ashes, and continually applied to the tooth, draws it out in a short time. ¶ Also burn Earth-worms and powder them, and having scraped the tooth round about, strew it on plentifully, and in a day and a night it falls out of it self. Therefore use it confidently; for it is celebrated often as a Mystery.

2. Clear the tooth a little from its place with a Pen-knife, and then strew on it Powder of *Euphorbium*; For this, if any thing will, draws out bones. Or Juice of Spurge mixt with Meal may be put in the tooth, and the rest fenced with Wax: For Spurge-juice makes the teeth to swell. After 2 or 3 days the tooth will be so loose that you may take it out with your fingers, or with an Instrument easily.

3. To make the teeth fall, onely gut a Lizard and drie it, and touch the tooth or the hollow of it with the Powder, and it will presently drop out.

4. Take a grain of Mastick or Frankincense fit for the hole, stop it well, carry it day and night; but take it out in the morning, and wash the mouth with Water somethig salted, a Decoction of Sage or of burnt Harts horn. Put in another grain, and continue it so long, till the tooth fall out piece-meal; and this is done without any hurt.

5. Bastard Hellebore has a virtue beyond all other things to make teeth fall, if you rub them with a bruised leaf; but you must have a care what teeth you touch, for they will all fall out.

6. Gum of Ivy that grows on an Oak draws out any tooth. ¶ Some affirm, upon certain experiences, that if you take a Whelp 3 or 4 days old, and cut off his left Ear, and with the blood anoint the teeth; all that are anointed will fall out in the night.

Diabetes, or, The Piss-pot Dropsie.

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I. ALL People write, that in the beginning of the Disease a Vein must be bled: But we must observe that when this Disease first appears to begin, it is in the State already. For when the Drink passes unaltered, the Veins of the whole Body and the Liver were emptied and dried up long before, but the Patients cannot know the beginning and encrease, because this Attraction is a natural work, and while it is performed onely in the Veins of the Liver, it is without any sense of Want, and therefore creates no trouble to the Body. And when it is in the state, all the serous humidity that is in the Veins, and was contained in the Liver and Stomach, is then consumed; otherwise there would neither be thirst, nor attraction of potulent matter unchanged. But in this case the Body is already thin and dry. And I think it not adviseable to let blood, when the Veins are already dried up. Nor let any man object, that when the Serum is evacuated, blood is left in the Veins: I confess some part of the blood is left; but where Serum is wanting, blood also must necessarily be wanting; for Serum is therefore mixt with the blood, that it may distribute the same into all the parts of the Body. Take away Serum, and you take away distribution; besides, since a great part of the blood is made of potulent matter, it is presently void what we drink by Urine, it cannot be turned into blood. Therefore in a true Diabetes Bloud-letting is never proper, whatever some men may say.

II. If

II. If salt Phlegm be contained in the Stomach, which being carried to the Reins increases the Disease; or if cholerick humours be carried to the Stomach, to the end they may be diverted from the Kidneys, a Vomit may be allowed, of Barley-water, with Radish-juice, Powder of *Asarum*, or the like. But, according to *Aëtius* his opinion, Vomit provoked by large drinking of Water immediately as it is drunk, is to no purpose: because sudden taking and rejecting onely cools and moistens the mouth of the Stomach, and can discharge nothing, nor can its virtue reach the Kidneys, the parts primarily affected.

Idem.

III. *Matthæus ix. ad Almanf.* fears the mildest Medicines, as Rose-juice, lest the sharp Juices at such a time should be attracted by the Kidneys, which attract strongly by virtue of the Medicine: But if a *Diabetes* be fed by a sharp and bilious humour, why are mild Purgers to be refused, which cannot put the Body in agitation, because mild ones will not do it? And provided they should, they ought not therefore to be rejected; for, according to *Galen*, *aphor. 24.* We do not use a Purge because of the Fever, (for we know on that score it will do hurt,) but because of the humours that cause it. Wherefore there must arise more benefit from evacuation of noxious humours, than there can detriment (which will necessarily follow) from purging Medicines.

IV. In an exquisite *Diabetes* caused by attraction of urine *Cassa* is proper according to *Capivaccius*. But *Matthæus Iradi* prefers a Clyster before a Purge. Yet *Capivaccius* says, it should not always be cooling. He holds that Tamarinds in a moderate quantity, without the Diuretick Powders, are proper. Manna and all Sweet things, that in hot Distempers turn into Bile, must be omitted, according to *Theodor. Baronius*, *de oper. mejendi, l. 2. c. 5.* He says, *Citrine Myrobalsans* bind up the Pores, and having loosened the Belly exasperate the Bowels, therefore the first time they are convenient is after perfect Concoction.

V. Revulsion and Purging premised, certain Diureticks, that are cold and moist, now and then absterfive ones are convenient. Such are chiefly Whey, in which, when there is need of absterfion, Barley, with Caper-bark and Bean-shells may be boiled. If there be need of greater absterfion, you may add also bitter Almonds, or Lupines, or Vetch; for they are strong Detensives. After Detensification the acrimony of the humour must be cooled and allayed. Some reject all things that provoke urine, cold as well as hot: But if the Kidneys be affected and imbued with a salt and sharp humour, how can it be, that the impacted matter should any way be carried off, unless we use things that provoke urine? *Galen* indeed, *13. method. cap. 12.* forbids them, when the Kidneys are affected; but he onely means thus much, that the humours which are elsewhere should not be carried to that place: But he no where teaches that the impacted humour should not be carried away by the same place. So a Vomit cures vomiting, raised by an humour impacted in the Stomach; so purging Stops a Loosness.

Saxonia,
Frel. pract.
part. 2. c. 33.

VI. The *Arabians* commend the use of Sweating Physick, that they may divert the matter from the Kidneys to the Habit of the Body. But this operation is suspected by me: for they would either carry into the habit of the body the Serosity then contained in the Liver, or the potent matter lately drank. Perfect Serum they cannot get out, for it is in the Veins, and they are dried up. It is not made in the Liver; therefore they will draw the potent matter unchanged. For the Serum is not retained in the Liver; and it is much worse for drink to be distributed unaltered into all the Veins and habit of the body, than presently to be carried off by urine. ¶ Lenitives, &c. being premised, some use to raise a Sweat in a Bath of warm water, though at this time it succeeds better in bed with bottles full of water. Now some give a Decoction of

Cinquefoyl and China: but I think it more advisable, after taking one drachm of Harts-horn philosophically prepared, according to *Paul*, that the Patient drink plentifully of cold water and presently be covered in a hot bed, applying bottles full of hot water to his sides.

Eortis, con-
sult. 1.
cent. 4.

VII. In a *Diabetes* the use of Narcoticks is wholesome, because it cools, thickens thin humours, hinders motion, causes sleep. *Aëtius* uses Narcoticks while the Disease increases; but it may not be amiss to give them when it is at the height, with what ought being premised.

Augenius,
Epi.

VIII. Astringents are good to bind the dilated Vessels, but onely in the progress of the Disease, and because the retentive faculty is also decayed. The *Arabians* use them without observing any distinction of time; yet they will do hurt in the beginning, while the Kidneys do as yet retain noxious matter, and because they increase driness, and the attractive faculty of the Kidneys: It is better then to use attenuating and moderately moist things.

Mercatus.

IX. Violent Astringents inward and outward must be avoided by reason of drying. ¶ For a Hædick may be feared. Too cold and astringent things upon the Spine hinder Transpiration.

Matth. de
Gradi.
Rondel.

X. If a *Diabetes* be produced by a volatile Salt, and that sharp, either applied outwards or taken inwards, or any way secred and existing in our body; certainly its cure will consist in the contemperation of the foresaid more sharp volatile Salt, both by oily things, as Emulsions of Barley, sweet Almonds, Seeds of white Poppy, Melon, Cucumber, &c. by sweet Milk of the Cow, Sheep, Goat, Woman, Ass, &c. And by Acids, but contempered with a volatile Salt, sweet Spirit of Salt, &c. mixing them with convenient Drink, Broths, &c. but not with the aforesaid Emulsions or Milk, because all sower things make them curdle.

Sylvius Ap-
pend.

XI. I believe the chief and most frequent cause of a *Diabetes* consists in the too much dissolved and lax mixture of the blood, and likewise scarcity and less than ought of urine, in a too strict consistency of blood. If the cause of this lax and dissolute consistency, which makes it apt to dissolve into Serum, be inquired, we say, the fusion of it, as also of Milk, proceeds from hence, because since in the mass of it Salts of divers natures meet and are associated, the rest of the particles being freed from the Salt ones (which keep them one from another, and contain them in mixtion) make a Separation. And it is plainly evident that Salino-fixt and volatile particles are always in the blood naturally, among which if at any time an acid Salt, or one that has obtain'd a fluidity, do come in a sufficient quantity, it will easily produce the aforesaid Disease. Hence it is, that *Rhenish* wine, &c. and acid Liqueurs, when they are drunk, provoke urine plentifully: for this reason also, Medicines, having a fixt or volatile Salt, use to move urine in some sickly People, whose blood abounds with an acid Salt. Astringent Medicines properly so called, namely, harsh, bitter and styptick ones, which by corrugating the fibres of the bowels, and by contracting them into a shorter space, do stop their expulsive and excretory faculty, and therefore hinder Purging upwards and downwards, although they use to be vulgarly prescribed, to hinder pissing, they do little or no good, because their virtue is able to do nothing in the mass of blood, and it reaches not the Kidneys or Bladder. Wherefore that it is to no purpose in a *Diabetes*, to prescribe the rind and flowers of Pomegranates, Medlars, Tormentil-roots and the like, as Reason dictates, so Experience confirms. But the things that are found to do most good, and square exactly enough with our Hypothesis, some of them are such as hinder the combinations of Salts, and consequently the fusion of Blood, such as those that are vulgarly called thickning Medicines, and have

have viscons and glutinous Particles, which being admitted into the mass of blood pertinaciously adhere to its active Particles, and fever them, and so hinder them from combining mutually among themselves, or with the Saline ones any other way in fusion: Other things dissolve the accretions of Salts; and therefore restore the mixture of the blood, such as Saline things of another nature which naturally stick to an acid Salt, and so recall it from the combinations it has entered into within the blood, such Medicines are they especially that are indued with a fixt Salt, and with a volatile and alkalizate one. Besides these two primary sorts of Ichureticks, there is another secondary one, namely, an Hypnotick, which by putting a stop to the animal Oeconomy, makes the vital Regiment to be performed more sedately, and therefore with less fusion of the blood, or precipitation of the serous and nutritious humour.

Willis.

XII. It sometimes proceeds from too much cooling of the Liver: And observe this, for no man, to my knowledge, has taken notice of it: Reason persuades it; for if a Dropsie be caused, why may not a Diabetes? When the Liver breeds Water, why may it not as well send it to the Kidneys as into the capacity of the Belly?

Saxonia.

XIII. I first cured my self of abundance of Urine, and then my young Daughter, and as many as came into my hands; when all died that fell into other hands, though they were reckoned famous men. And when, in the presence of some of them, I had almost cured one man in a day, who had been a month under cure and had found no benefit, but was well nigh dead, they admired. I abstained from Purgatives; they gave them. I abstained from fat things; they advised the use of them. I gave them Raisins; they consented; but they would not admit Lentils, but against their will. I used hot things; they cold. I applied Astringents to the Kidneys, they feared lest the Water violently stop, would flow back to the principal Bowels. I took away the Feather-bed; they forgot it. I often washed the Feet; and they neglected it. I gave White-wine; they said of right it was not proper. I forbade exercise after meat; I enjoined Sleep: they agreed with me only in these two rules.

Cardanus.

Capiuacius.

XIV. In a spurious one, by transmission, we must have a care of Coolers.

XV. It is worth remembrance concerning Quinces, which have a cooling and astringent faculty, how *Pascalius* in his *Praxis*, c. 50. writes, that *Alfonfus*, King of Naples, upon the use of them, fell into a Diabetes.

Saxonia.

XVI. A Bath of Sweet-water may be convenient, for it moistens the body, that is then dried, especially if it be indued with a cooling virtue: but a mineral one and of a drying faculty, by no means; for it would quickly bring the Patient into a Consumption, especially if he be of a hot constitution.

Idem.

XVII. A man thirty years of age after plentiful Drinking of Wine fell into a Diabetes, with most violent heat, extreme thirst, and so great a flux of urine, that he made thrice as much water as he drank by day as well as night. But after Blood-letting, and the frequent use of Tincture of Corals, Decoction of Plantain, and especially that mixture *Fr. Sylvius*, *Prax.* l. i. c. 30. § 183. hath to temper the volatility of the pancreatick Juice, within fifteen days the Disease abated. This is the Mixture, Take of Water of Plantain 3 ounces, Cinnamon, distilled Vinegar, each half an ounce; Syrup of Purflane 1 ounce, Powder of red Coral 1 drachm. Mix them. This Mixture may be given by spoonfuls. If any one would have it stronger, he may add to it half a scruple or a whole one of *Acacia*, or Juice of *Hypocistis*.

A. Herman-nus, commissarius, an. 1672. obs. 183.

XVIII. Medicines must be given presently, because it brings Men often into a Consumption, through the exceeding Heat of the whole Body,

especially of the Liver, Kidneys and Venous kind: I cured a Country fellow who was taken with it after a burning Fever, with Coolers and Moistners, adding Astringents and Strengtheners; among other things his whole Body was wrapt in a Plaster.

Knoblochius, in Aphor. p. 499.

Medicines especially made use of by eminent Physicians.

1. These are most effectual Trochiscs, which contain of the mucilage of Fleawort-seed, Coriander-seed prepared, burnt Ivory, Coral, Amber, Dragon's blood, Red-saunders, Flower, each two drachms; Camphire, half a drachm. Make it into Trochiscs, with the aforesaid mucilage, which may be given with Sheeps-milk, when the Butter is taken out.

Alex. Benedictus.

2. Take of Powder of red Roses, Myrtle, Bole-armenick, Mastick, red Coral, Dragon's blood, Shells of roasted Chestnuts, each 1 drachm and an half; Barley flower 1 pugil, Oil of Myrtle, unripe Olives and Mastick, each one drachm and an half; Powder of Myrobalans, Citrine, Chebuli and Indi, each 2 drachms, with Turpentine and Bird-lime of Mistleoe of the Oak what is sufficient; make a Plaster. It is admirable to stop and digest the serous matter.

M. Aur. Severinus.

3. There was a man cured several with these Trochiscs, and I cured a young man with them in four days who had a Diabetes, and pissed involuntarily in his bed. Take of Roses, burnt Ivory, each one drachm and an half; Seeds of Purslain, Coriander, Saunders, Berberies each 2 drachms; Camphire half a drachm. Mix them with the Juice of sowre Pomegranates. Make Trochiscs, every one of which may be of a drachm weight, and one may be given morning and evening mixt with Cold water and Syrup of Roses. It is a good and experienced Remedy for this Disease.

Arnold. Villanovus.

4. This Powder is very good. Take of Powder of a Hen's gizzard washed in Wine, a Hare's head burnt, Mastick, each half an ounce, Nutmeg, No. j. Bees, 5 drachms; Ashes of a burnt Hedge-hog, three drachms. Mix them. Make a Powder. The Dose is from half a drachm to a whole one.

Arnold. Weikardus.

Diarrhoea, or, A Flux or Loosness.

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- Whether when the Stools are frothy we must always have respect to the Head? XI.
- Whether a Loosness or Vomit come from the Brain? XII.
- The Cure of a Mesenterick Loosness. XIII.
- In a wasting Flux we must have special respect to the Cause. XIV.
- In wasting Fluxes we must not give Purges that leave a striction behind them. XV.
- This Flux must not be cured by Astringents. XVI.
- A malignant Flux must be cared otherwise than a common one. XVII.
- A Scorbutick one must not be cured by Astringents. XVIII.
- The Cure of one complicated with a Cough. XIX.
- With the French Pox. XX.
- We must have a care of Sowre and Sweet things. XXI.

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When

When Venus is proper? XXII.

Whether astringent meats taken first do bind? XXIII.
Medicines.

I. **T**He Case which happened to *Stimargus his Wife*, who after the disturbance of her Belly for a few days, when she had taken great care to stop it, miscarried of a Child at four Months, and after she was cured of her Miscarriage, she swelled, teaches us how great danger there is in stopping a Loosness. This Woman must needs have gathered many and bad Excrements in the first months, whence it came to pass, that in the fourth month following she was taken with a Loosness, which much endangered her miscarriage; for unless it were stopt, there would be danger of abortion from the irritation of the Intestines that are next the womb, or from subtraction of nourishment from the child. And perhaps for fear of this, some Physician endeavoured all he could to stop it; and because her body was not purged, it thus happened; for the excrements were turned to the womb. But because there is no less danger, if it be not stopt before it go too far, we should in every Flux cautiously consider, whether we should promote it farther, or suffer it to run on. And the scopes in this consultation are the Benefit, the Ability to bear it, and the manner of its running: For if with benefit and ability to bear it, it run well, we may let it alone: But if it flow slowly, we may promote it. If without these things, we must stop it.

Vallesius,
l. 2. Epidem.
Sed. 2.

Saxonia.

II. In a Loosness we sometimes give Purgatives, for the discharge of the matter affixt to the Intestines, that irritates the expulsive faculty, but it is not prescribed for evacuation of the affluent matter; but abstain from Medicines offensive to Nature, lest the humours be carried from the Centre to the Circumference.

III. *Galen* *ad Glaucon*. 14. seems to have made a general rule that if a Flux be not so large as it ought, we must not meddle; saying that those who will do any thing, either let blood or purge, do cast their Patients into greater danger. I cannot acquiesce in this Axiome, but decide the matter by certain conclusions. The first is that a Flux truly symptomatick, though imperfect, must never be help: That is properly a symptomatick Flux, wherein matter is discharged, that causes not the disease, which is far different from the nature of the Disease; but when such things are voided as cause not the Disease, they help not the Disease, and strength is wasted. Hence *Galen* *aphor*. 47. *Excretions which help not the disease are always mortal*. And because for the most part such Excretions happen in the beginning of Diseases, hence it comes to pass that *Galen* in several places reckons Excretions then made, as useless, and pernicious, neither to be admitted nor promoted. But there is an excretion even in the beginnings, that is proportionate to the Disease, wherein such things are voided as ought; this is called symptomatick in respect of time, it is not such in respect of the matter voided; for such things are voided as ought. This therefore, if imperfect, must be holpen, according to *Galen* *Comment*. 5. 5. in 1 *Epidem*. in which place when he saw *Hippocrates* washed *Meton's* Head the fifth day, that he might help the blood which run imperfectly from his nostrils, he writes that by this example *Hippocrates* hath taught us, imperfect excretions may be helped even in the beginning, which Reason also persuades, drawn from *Galen* 1. *aph*. 23. *As quality to quality, so quantity must answer to quantity*. Therefore when such things are voided as ought, it must be helped by purging, if it be imperfect, though in the beginning. This is confirmed, if in the beginning we may carry off turgent matter, that matter is not onely turgent, which is moved to the places of excretion, and yet is no way carried off; but that also which tends to the places of excretion, and begins to be voided, but not so much as it ought; therefore it must surely be helped.

As for *Galen*, who forbids it, I say he forbade it, because in his time benign remedies, and such as were indued with an astringent faculty, were not found, which are granted us in this age, and may be safely administered. The third Conclusion is, if the excretion be critical, but imperfect, or be made on a chief critical day, with all the signs of a very good Crisis, then although it seem imperfect, nevertheless it must not be holpen: For it can scarce or not at all otherwise be, but that Nature, with all the signs of a very good Crisis, must make a perfect excretion upon a chief decretory day. But if it be not a principal decretory day, or there be not all the absolute and perfect signs of a Crisis, then we must consider whether there be any danger of the Flux of the matter to some principal part, which might either cause or increase an Inflammation; in which case even on a critical day, it is lawfull for us to help Nature: The reason is this, because when there are all the signs of a perfect Crisis, and at what time evacuation is made, Symptomes begin to encrease, it is a sign that more matter flows to some principal part; than to the ways of excretion, and therefore Nature must be helped. But if nothing urge, you may suffer the critical day to be over, and Nature may be helped the next, according to the advice of *Hippocrates* and *Galen*, 1. *Aphor*. 21.

IV. Although Bloodletting may seem formidable in this case, yet it is sometime proper when sharp bile is voided by stool, which is perpetually bred anew by the hot and dry intemperature of the Liver. ¶ If a Loosness happen with signs of abundance of Blood and strength, Bleeding may be celebrated in the beginning; but if there be a fever, blood may be taken away, though there appear no Ptethory. If there be a Flux, when there is a Plenitude or Cachymie in the common veins here is the difficulty; for first of all, all Astringents are suspected, because the Flux from a noble part to an ignoble one is prohibited, for the matter being restrained within the common veins, there is imminent danger of a Fever and Putrefaction. Secondly, Purgers hurt, because the Flux is more already than it should be, seeing it carries along with it the alimental matter, which is contained in the Stomach and intestines. Nor, Thirdly, are Vomits proper, First, because that matter, before it be drawn to the Stomach, comes to the Guts, which because weaker, will sooner receive the Fluxion than the Stomach: Secondly, it is not lawfull to carry such humours, through so sensible a place. In this fullness of the veins I should commend letting of Blood above all other things, First, because it carries off part of the matter together with the Blood, for all the humours are mixt together. Secondly, revulsion is made from the Intestines without danger, nor is the matter which is evacuated translated to another place, as in most revulsions. Thirdly, this letting of blood subdues the Cause increasing the humour, that flows to the Intestines; for in plenitude there is a hot and moist intemperature; but blood-letting cools and dries. Therefore *Galen* 7. *Method*. X. says, that in all Fluxes to the Stomach the body must be evacuated (that is by blood-letting, which he contradistinguishes from purging) or purged. And 5 *Method*. 3. in Fluxes of the Belly he says, for revulsion the humours must be carried to the Womb. Which is the very same thing that he taught 7 *Method*. 11. that sometimes Loosnesses come because of the suppression of the menses or hæmorrhoids, or loss of a Limb, or some excretion suppressed: In which case the cure of the Flux is to bring down the menses, open the hæmorrhoids, and quickly to procure the usual evacuation. Therefore *Avicenna* 16. 3. *traktat*. 2. *cap. de Diarrhoea ex vitio Lienis*, says, if there be need of blood-letting in this Diarrhoea, we must let it, and if it be lawfull in this, why not in a cholerick and melancholick one with a plenitude of the whole?

Idem.

Enchir. Med. præd.

Riverius.

Saxonia.

V. *Mercurius*

Riverius.

V. *Mercurius Diaphoreticus* given for several days to 12 grains takes away all impurities of the body, which sometimes use to create stubborn Fluxes.

VI. Where a melancholick humour abounds, which is dry, astringents are altogether improper; for the noxious humour being thereby increased, affords matter for the Flux. Therefore we should rather treat it with thickeners and coolers. Which rule should not only be observed in this case, but in any other Flux, where there is suspicion of black Cholera. Into which opinion my observation forced me, which I had of a woman at *Vicenza* the last year, who being sick of a Dysentery and Fever, after she had been purged with boiled Whey, and the peccant matter had been diminished not a little by washing Clysters, when she came to astringents was evidently hurt by them: for besides that the Flux abated not at all, and the Fever was not a little exasperated, she had a sower taste so constantly in her mouth, that she complained more of it than of any other Symptom: Now I knew this happened, because she was of an atrabilious Complexion; Wherefore laying aside astringents altogether, and using thickening broths, and attenuating Medicines, not long after this the troublesome taste went out of her mouth, and the Flux and Fever at length left her, and the Woman was perfectly cured. *Hippocrates*, lib. 4. Acut. vers. 122. If the belly be moist and wasting, and the mind troubled, and the Patients scarce give answer to what they are asked, &c. which he says are melancholick things, then prescribes cold and thick fortifications, and stopping potions more viscid than astringent. These Potions as they must have no excess in their qualities, to the end they may repress the intense qualities of the humours, so in deriving the same humours to the urinary passages by their diuretick virtue, they stop the Flux at self; but astringents by their drying faculty render them sharper: And if they partake of black Cholera, promote the generation of them. Now things that provoke urine are most proper to cure Fluxes of the Belly, where there is no room for astringents. If viscid potions be proper, because they carry the humours to the passages of urine, then the use of Quinces, especially of their juice, seems proper; which, beside their astringent virtue, are so remarkably diuretick, that, as *Pascalius* in the 50th chap. of his method, testifies, *Alfonso King of Naples*, by the use of them fell into a Diabetes. ¶ But this distinction of things that stop a Loosness must be observed. Things that stop a Loosness are twofold, some do it with astringition, others without astringition by resisting the cause of the Loosness: As if the Belly be loose through the acrimony or Saltiness of the juices, exterline things by taking away what sticks to the Intestines, use to stop it, and fortifications that take off the edge from these qualities as thick things without taste, such as flower of several sorts: It by reason of burning Heat, whence come consuming Fluxes, Water cooled in Snow may stop it: If through multitude of juices flowing into the Belly, thence things that derive unto another part, as Diureticks: And Purgers also often stop a Flux, superfluity being plentifully evacuated, and the belly dried. These stop it by accident, which often cure with more safety than astringents, for here, where the matter is not evacuated, especially if it be malignant, they are very dangerous. ¶ A man robust and choleric was taken in the midst of Summer with a choleric Diarrhoea, very violent with extreme thirst. I prescribed him *Sal prunellæ* in his ordinary drink, as also in Juleps of Lettuce and Purslain-water, to be taken thrice a day, and he recovered in twenty four hours.

Prosper Martianus, comm. in loc.

Idem, ad vers. 128.

Vallesius, comm. in e-
suo locum.

Riverius.

VII. *Hippocrates* lib. 2. Epidem. Sect. 3. mentions a Loosness that troubled sick persons at a certain season, which could no way be stoppt, neither by food nor medicine, which rather seemed to be cured against reason, and in a manner by contrary means: because not many things, but moderate ones did

some people good, if they lay in a cold place with a bed under them. I guess this happened by chance to some sick persons, who while they were impatient of their disease, tossing themselves hither and thither, lying sometimes in Bed and sometimes out of it, went less to stool: Which seems contrary to all reason, because Cold ulcerates and bites, and is therefore apt to encrease a Loosness: But it does not this when it proceeds gradually, as in the case proposed, by reason of the manner after which he used it. From these things we gather, that outward cooling applied gradually and gently to the whole body, tempers the inward heat, first of all by repulsion of a milder heat inwards, and then subsequently by the actual coldness of the Remedy itself. Wherefore as often as we cannot attain it by coolers taken inwardly; it must be procured by outward application of things that are actually cold. Which I think is an excellent remedy in a Loosness from colliquation.

Martianus, comm. in loc.

VIII. *Avicenna* hath written, that Narcoticks are very good, because they thicken the matter, and cool the part, cause sleep, and lay pain: yet we must not use them, unless necessity force us upon it, and it is urgent in a hot body, and a hot Air, and in a Flux from sharp matter: We mingle strengtheners with them, as Castor, Saffron and Xyloloe; wherefore *Philonium* is a laudable Medicine, the use of Opium otherwise is dangerous. *Avicenna* mentions one that died upon applying Opium below. This order in the using will create security; First, we must use it outwardly, Then we must put it in a suppository. And then, if the Disease get ground, by the mouth. ¶ The Son of D.N. after a tedious Tertian, was taken with a Loosness, so vehement, that within three days his strength was quite spent, and was in great hazard of his Life. When I was called, I prescribed a drachm of powdered Rheubarb, after which he was much worse. The day following, at the hour of sleep, I gave him a bolus of Mastick, and Terra Sigillata, each half a drachm, Laudanum 4 grains. His Loosness stopt, yet he slept not, the days following he went to stool only twice or thrice, and within a few days he was perfectly well.

Heurnius.

Riverius, cent. 3. cap. 20.

IX. When a Loosness is cured by the use of a Bath, it is cured by revulsion. For *Galen de rat. victus* §8. says, In them that have a great Loosness a Bath stops it: but they that have a costive body, must not be bathed: The reason is, because the Bath makes revulsion from the Centre of the Body. We have therefore several times cured old Loosnesses by the Bath, which many have given over for incurable. ¶ I was once taken with a choleric Loosness, having so great an acrimony, that it galled the Anus, and brought sharpness of Urine, part of the matter being translated to Urine: A bloody Flux was at hand. I went into a warm femicupe, and I was immediately cured. ¶ But there ought to be caution, lest the Cachochimy be too great to be drawn to the Circumference by the Bath: for the juices being melted, and the Intestines and vessels that reach thither loosened and moistened, the Belly will be looser.

Sanctorius.

Riverius.

X. We must not stop it rashly, for, as *Celsus* says, lib. 4. To be loose for a day is good for ones health, or for more, so there be no fever, and it stop within seven days, for the body is purged, and what would have done hurt, is beneficially discharged, but continuance is dangerous: for sometimes it causes the Gripes, and a Fever, and consumes the strength.

XI. If the Loosness come from the Brain, the stools are frothy, *Hippocr.* 7. 30. aphor. But we must not trust this sign alone, we must enquire farther, whether the Brain carry any marks of harm, if there be a Catarrh, Deafness, any remarkable heaviness or pain in the Head, inclination to sleep, especially if he go oftner to stool in the night than the day: for Phlegm may flow from the Brain, without wind mixt with it, which is the original of froth. Again humours contained in the Stomach and Guts, may admit a mixture of wind, and frothy excrements af-

ferward appear, but the head not hurt, which therefore must not be tired with Medicines.

XII. A certain man vomited after meal, at night also, sometimes a thinner, sometimes a thicker humour, his head ached and was heavy. It was thought that all this store of Phlegm came from the Brain; divers remedies were tried, and at length a Seton, but all in vain. When the Body was opened, a *Fistula* was found in his Stomach. In this case some make an Issue in the top of the head, which is a remedy as doleful as it is fruitless. The sick are not cured but consumed by it; and all indeed out of an inveterate error in opinion, that the Brain did daily fill it self with a phlegmatick liquor, and sometimes poured it into the stomach. But if the humours of the Brain took this course, an Issue in the crown of the Head could not stop it; for (as the common opinion says) the inner veins of the Brain send this humour, which these Issues do not reach, neither can they empty them nor reach them. If any one may be thought to have been cured by them, he might indeed suffer a vomiting or Loosness, but not to be imputed to the Brain.

Sneiderus,
l. de Concr.
Spec. p. 439.

XIII. It is difficult to cure a Loosness from matter contained in the Mesenterick Vessels; neither Vomits, nor Astringents, nor Diureticks, nor things that draw to the superficies of the body, are good for it. Not Vomits, for reasons before alledged. Not Astringents, for if bad and corrupt matter be already gathered about these veins, they will stop the Flux, and will raise either a swelling or some obstruction in the part: therefore 13 meth. 14. Astringents are forbid in the beginning of an Inflammation of the Liver, lest the humours being retained, the Inflammation should be encreased. Not Diureticks, which seems a Paradox, for Galen 5 meth. 3. and 13. meth. 11. teaches, that when the Intestines are out of order, the humours must be carried off by urine, and for aphor. ult. 4. Sect. 1. I take my reason for it from Galen. 7. meth. 11. who laying down the general method of curing Fluxes, teaches, That the humours must never be carried from parts of less moment to those of greater moment. Of the former sort are the Guts, which being large can bear the quantity and quality of humours, without any great trouble. Of the latter are the Liver, Veins, Kidneys, Bladder, all which having narrow passages, besides the filth and acrimony, are apt either to breed the Stone, or Ulcers, sharpness of Urine, or Strangury. And especially because the Guts themselves are a fit place for the purgation of the humours beyond the gibbous part of the Liver: Neither may these humours be drawn to the habit of the body, since they cannot pass thither but by the Liver and common Veins, parts of moment: Nor may the opinion of several be followed, who for revulsion apply Cupping-glasses to the parts where the Flux begins, although they be noble, as if the Flux begin at the Liver, to the Liver; if at the Spleen, to the Spleen; for so not onely the matter gathered there is retained there, but also new matter is drawn from the neighbouring places. What must be done therefore? Three things must be done. First of all the matter must be brought away by Clysters, or astringent Purgers. Secondly, if it be thin and hot, it must be thickened and cooled. Thirdly, the Diseases must be cured, whereby it was bred.

Saxonia.

XIV. The cure of a waisting Flux (which is when nature cannot retain the humours, for some weakness from the alteration of temperament) consists in the restitution of the temperament: so a draught of cold water has cured several that have been sick of heat; for whom walking in cool places, and cooling diet is good, without the use of Astringents: On the contrary they that labour under a cold intemperature, are benefited by strong wine and food high seasoned; by heating frictions and anointings; for whom also the use of astringents is hurtfull.

Mercatus.

XV. Whether in waisting Fluxes (as some famous

men have thought good) it be convenient to give purging Medicines indeed, but such as are apt to bind after evacuation, the *ratio medendi*, and a right method may inform us: For seeing by such Fluxes, it is not the superfluities that are brought away either from the humours or the solid parts; but it is either the humours themselves, or the solid parts, that are wasted, no man should by any means offer to purge; but onely ply the causes of Colliquation. For neither is Evacuation endeavoured by the Purge, proper for the colliquated matter, (since Nature brings that away of it self,) nor is it indicated by what is to be colliquated, since the onely indication to be taken in this Disease is that which hinders colliquation: Which Colliquation a Purge may not onely not hinder, but increase. And how dangerous this is, let them tell you, who boldly attempting it, have brought the sick into a dangerous condition.

P. Salus,
l. de febr.
pestilent. c. 24.

XVI. Nor yet in these Fluxes is the use of astringent medicines approved; because if that matter, which is squeezed out by colliquation, be altogether bad, and retained within the body of the sick, it may do more hurt when retained, than when voided: for beside, that by its gravity it would continually increase the Fever, so also by its retention it would get a worse quality; whereupon it would increase the Disease, or it might with ease take its way to the heart, or other principal parts. Wherefore the Evacuation of matter already bred, must be wholly left to Nature, and the Physician must do his utmost upon the causes of Colliquation.

Idem, ibid.

XVII. Among the several differences of Fluxes of the belly a virulent or poisonous Flux may be reckoned for one; which if it be treated the common way, all that are sick of it dye before you are aware. It differs from others not in *Specie*, or form, but onely in cause or manner; because the cause is poisonous, and the disease malignant. Therefore a diarrhoea, lenteria, dysenteria and hepatick Flux may be poisonous in genere, and in specie. For Galen 4. aphor. 21. making mention of a Flux that was abroad in his days, in time of the Plague, says, that the excrements were yellow and red, and at last black. In the cure the Flux it self must be observed, distinct from the poison. 2. The poison it self. In respect of this onely two remedies are necessary; Drawers to the Skin and Alteratives: Nothing is better than the former. 1. Because there is a due revulsion from within to without. 2. Because the poison is drawn to an ignoble part, that is the skin. It may be objected, if in curing of Fluxes there be indications taken from the matter, from the causes and affections, without the poison; if there be indications taken from the poison also, upon which must we fall first? Here we must consider the way and manner of the Flux: for if it be swift in motion, which the constitution will shew; and if besides it be malignant, we must straight oppose the poison: if it be chronical and less malignant, so as to give some truce, we must first satisfy the common scopes. Drawers either draw specifically, or by their heat: All the first are poisonous, which must be so corrected, that they may be fit to draw, not to corrupt the Body. Vescicatories draw by heat, which hold the first place; and they are convenient also in a colliquative, sharp and hot Flux. But the cause of the colliquation and heat must be enquired into: for in poison, beside the occult quality, there is a heating, colliquating and putrefactive quality, so that if the poison be not immediately got out, all things are given to no purpose. Therefore in a hot and colliquative Flux, so it be with malignity, we may use Vescicatories, Sinapisms, Baths of hot water, Frictions, Anointings, Cupping-glasses. Alteratives also act by an occult or manifest quality: The occult, some by heat, some by cold; where the fluent matter, the causes and the disease must be considered: if all of them conspire in heat, as you may observe for the most part in malignant Fluxes, you

Saxonia.

you must use cold Alexitericks, as Unicorn's horn, Hartshorn, Pearl, Bole Armenick, juice of Citron, &c. Observe, in malignant Fluxes there must be a great quantity of Medicines, and often repeated.

Willis.

XVIII. An inveterate *Diarrhoea* which often happens to Scorbutick persons, must by no means be stoppt with astringents, neither is it easily cured with alteratives, nor with any Antiscorbuticks. Spaw-waters, impregnated with Iron or Vitriol, are the best remedy for this disease: Next to these are medicinal or artificial Chalybeates, which doe much good. *Crocus Martis* well prepared may justly be preferred before all others.

Cappivaccius.

XIX. If a Loosness have a cough with it, we must abstain from astringents: But because Medicines do bind either by their thick or by their viscid substance, when there is a cough, astringents are used, that have a viscid substance, such as Wheat flower, Gum Tragacanth, Comfrey and Plantain.

Idem.

XX. When a man has got the Pox; and has a Loosness with it, then *Sassa*, *China*, and the new Antidotes are good; for then we must not desist from *Sassa*, because the disease depends on a venereal virulence. Such a receipt as this may be proper; Take of juice of Sow-thistle depurated 2 drachms, powder of *Sassa* 1 drachm, Gum Tragacanth half a drachm, *Spec. & santalis* half a drachm; mix them, make Bolus's. This Medicine alters the venereal virulence, and the Flux depending thereon: But because Sow-thistle and *Sassa* open and loosen, to correct the *Basis*, and especially the *Sassa*, we may mix half a drachm of *Spec. Trion Santal.* or *Tragac.*

Idem.

XXI. We must have a care of sweet things; for they, because cold and moist, make the matter more fluent and loose: Therefore they doe most hurt, when the Loosness comes from a hot matter in a hot body. Nor may we use things that have Vinegar in them, and we must especially abstain from that which is sharp, and from any quantity of it.

Fortis.

XXII. *Aristotle* 4. *Probl.* 18. thinks that *Venus* sometimes stops an old Loosness, and so think *Paulus* and *Ætius*. But it is not proper when there is a defect of innate heat.

G. Wolf, Wedelius.

XXIII. Whether do astringent meats taken first bind? Some alimentous astringents taken before meal bind the belly; but taken after meal loosen it, as may be gathered from the constriction of the Fibres: For when they are given before meal, the *Pylosus* is more strengthened; whereas after meal, by accident, the sides of the Stomach being straitned, it is made more lax: and this is particularly verified in Quinces. Whence also it is manifest, that astringent Medicines themselves cannot conveniently be given with meat. Moreover I have observed that by accident in persons of a more tender and lax texture, as to their Stomach and Guts, a styptick powder has caused a Loosness.

Medicines especially made use of by eminent Physicians.

Ætius.

1. Mulberries not ripe, but as yet sowre, dried in the Sun, then powdered and applied, and upon occasion given inwards, will make a great restringent Medicine for a Loosness, and may well be given to colliack persons, who have been long sick, in powder either with meat or drink.

Alex. Benedictus.

2. Old Cheese is a most effectual Remedy, boiled till all the saltness be out; they taste it first, then after it is boiled they dry it. A drachm weight stops a Flux wonderfully. ¶ Also the inner rind of a Chestnut-tree is highly commended, for it stops an old Flux. ¶ Among all Medicines Mastick is most commended, taken in juice of Quinces.

3. Many have been most easily cured by taking new Cows Milk frequently, with Yelks of Eggs dissolved in it. ¶ There is also a basket-bread,

wherewith Elder-seed is mixt, a drachm of which given in wine is highly commended. Also bread made of Rye flower with juice of Elder is very good for all Loosnesses.

Petrus Bo-rellus.

4. In a Flux of the Belly, that is very pertinacious, a most effectual remedy is propounded by *Avicenna*; and it is old salt cheese, which must be often washed and boiled, till it become altogether fresh. The dose is a drachm with juice of Quinces.

Cappivaccius.

5. One had a loosness 3 years, at last when he had eaten Grewel with Acorns in it, his Loosness was stoppt. And after the universal remedies I use to give with success 1 drachm of Plantain seed powdered in a rear Egg.

Forestus.

6. Take of Dragons blood, Frankincense, Mastick, Mummy, *Terra Sigillata*, each 1 drachm. Bole Armenick 1 drachm and an half, *Carab.* Blood-stone, each 1 drachm. Make a powder, it deserves commendation.

Grulingius.

7. This is of wonderfull Efficacy. Sugar of Roses dissolved in juice of Quinces and Plantain water, heat and strained, and given upon a fasting Stomach. ¶ This is of incredible efficacy; Take of Quinces, or Pears, or Dates, green, 1 pound, steep them in Vinegar and water; boil them, and add of Roses and Wormwood each 1 handfull, of Cumminseed baked and steeped in Vinegar, 3 drachms. Make a decoction, and mash them together. Add of *Acacia*, Mastick, each half an ounce, Coral 1 ounce, Cloves, Spikenard, each 1 drachm, Oil of Roses, unripe Olives and Myrtle, each 2 ounces and an half, with 2 pounds of white Bread, or Bran, make a Cataplasma.

Lud. Mercatus.

8. A singular secret against the Flux of the Belly. Take some great and unripe Sloes, bruise them, strain out the juice, coagulate it upon the fire, till it be dry and become a kind of yellow powder. Give half a drachm of this in water of Sloes or Plantain.

Joh. Poppus.

9. Take of juice of spotted Arsmart, Houlleek, each 3 ounces. Boil them to a third part; they certainly cure a Loosness, though never so inveterate.

Riverius.

10. For a Loosness, let Pidgeons dung be dissolved in water of Fleawort or Willow; or let it be boiled in rain water, and the feet washed therewith. It is admirable and sure. ¶ Also the dung mixt with strong Vinegar, and laid upon the Navel, presently stops any Flux.

J. Dav. Rulandus.

11. Take a fat Turtle, pulled and drawn, wash her gently, put an ounce of new wax in her Belly, boil her in a sufficient quantity of Water. Eat her up, and drink the Broth. I found this to be truly salutiferous in one who had been a long time sick of a Loosness. ¶ This has been proved by often experience: Take a large quantity of Knot-grass, boil it in rain water. In this Decoction let the sick party set only the Soles of his feet, afterwards let him cover his feet with water, let this be done thrice a day for three days, continually increasing the water, till it cover his Knees. I have known several cured in this manner, and it may be tried without any inconvenience or danger.

Saxonia.

12. In a chylous Flux especially outward Medicines are of great efficacy, and are used with less danger; as a Plaster of Lupine meal, with oil of Nard, and the like.

Sennertus.

13. In any Flux and Pain of the Belly rain water, with Mastick boiled in it, taken warm is good. It is approved and certain.

Joh. Stokkerus.

14. The Liver of a Wolf, if a Spoonfull of it be taken in a morning, is an excellent Remedy.

Jacob. Sylvius.

15. Boil Knotgrass in Wine Vinegar; strain it, dip a double cloth in it, and apply it to the Stomach, Navel and Back. It is an experiment, that has helped many.

M. J. Wittichius.

Dolor,

Dolor, or, Pain or Ach.

The Contents.

Pain is cured by applying hot and cold things. I.
 A violent one in the Os sacrum cured by applying a Caus-
 tick. II.
 An external one eased by purging. III.
 A violent one in the shoulder eased. IV.
 In the Heel by application of a potential Causstick. V.
 Several pains in the external parts are not from a defluxi-
 on. VI.
 The cure of an Ach caused by a fall. VII.
 By a Defluxion. VIII.
 The virtue of Balsam of Peru. IX.
 Medicines.

I. IN this age of ours men use to cure several
 aches and ails, making no distinction, with
 some cold thing, as Egg-water, which is cold and
 binding also, in both which qualities it is repug-
 nant to the Ulcer. For all things that ease pain
 should loosen; but the white of an Egg is altoget-
 her binding, wherefore both it and all cooling
 things seem inconvenient, and all hot things seem
 helpfull, beneficent, and allayers of Pain. *Fabius*
Columna had an angry swelling arose on the upper
 part of his thigh, much resembling a Carbuncle, and
 while I looked after it, when several times I had
 cut off the uneven *Callus* from the *Sinus*'s and the edges
 thereof, I assuaged the bitterness of the pain, which
 must of necessity attend the cutting, by no other
 means than applying hot bricks in a cloth, and using
 hot things. ¶ One, who had a cancrus Ulcer in
 his tongue, was so afflicted in the upper tuberosus
 part of it, that he could not speak a word, and
 when I had heat a silver spoon in the fire, and ap-
 plied it to the pained place, he was forthwith rid of
 his pain, and moreover could speak freely.

II. A Dwarf, about 40 years old, had undergone
 a most violent pain, for 2 months, in the lower part
 of the *Os sacrum*, whereupon he went mad. Several
 things were tried to no purpose. I applied one
 Cupping-glass to the pained place, and another a
 little below upon the Buttock, with deep scarifi-
 cations, which run much blood, which being wiped
 off, I applied the Cupping-glasses again upon the sca-
 rified places, and blood ran again plentifully. The
 Patient seemed rid of his Pain, yet the next day I
 ordered a great Causstick to be laid to the pained
 place, upon the very scarifications, and kept it there
 twenty four hours; so that there was a broad Eschar
 and to the very bone. After the Eschar was taken
 off, it was cicatrized, and the Patient eased of so
 great a trouble.

III. M. N. was suddenly taken with most sharp
 vagrant pains, that sometimes tormented his
 Thighs, sometimes his Knees, Legs and Feet,
 and sometimes his Loins. A Physician ordered five
 Pottingers of Blood to be taken from him in an
 hour, and his pain no whit abating, he gave him a
 Pill of *Laudanum*, which gave him ease till next day
 at noon. But then his pains returning as sharp as
 ever, I prescribe him a *Bolus* of *Diaprunum Solutivum*
 half an ounce, Jalap 1 scruple, to be taken even at
 night, which nevertheless he would have spent in
 most grievous torture: it wrought ten times suc-
 cessfully; for his pains were much abated, and quick-
 ly after quite gone. He was a melancholick man a-
 bout fifty; and had formerly been troubled with
 many passions of mind. Therefore I reckoned these
 pains came from a very sharp and thin ferous mat-
 ter, which was violently carried hither and thi-
 ther, and that it ought to be quickly carried off by
 a purge.

IV. *Fernelius*, cap. de *Arthrit.* writes, that the Gout
 in the shoulder is very painfull, yet that it neither
 swells so much, nor is so red or hot, as in the *Sciatica*.
 As I was upon a journey, and did not sufficiently
 guard my self from the raging cold, I experienced
 these pains. The pain was most violent, hindring
 the motion of my arm, as it were tying it with a
 string to my body. I used this Cataplasim, which
 did me good: Take of common Bole, Chalk, each
 1 ounce and an half, Oil of Roses 1 ounce, Vinegar
 of Roses 6 drachms, Cream what is sufficient; mix
 them upon Coals; add of Saffron 1 drachm; apply it
 hot with hempen Tow twice a day. Sometimes I
 added powder of Comfrey root and Oil of Chamæ-
 mil. You must observe that as the pain ceases, the
 Arm sometimes withers: Therefore convenient fo-
 mentations, unguents and Plasters must be used,
 wrapping it in a Hare's skin, &c.

V. One had a pain in his Heel so sharp, violent
 and continual, with a Fever, that he could take no
 rest, neither day nor night. His body was purged,
 and vomited for revulsion sake; he was bled in the
 Arm; all Anodynes were applied without success;
 the part affected could scarce be perceived to be
 swelled; for the thickness of the Skin. At length a
 potential Caustery was applied to the pained part,
 after some hours the Eschar was separated with
 a Razor, one drop or two of ichorous matter drop-
 ped out; The Ulcer was kept open for some days af-
 ter the fall of the Eschar, and powder of Precipi-
 tate was strowed upon it.

VI. Divers Pains and Tumours also, which are
 vulgarly ascribed to Defluxions, are produced by
 the effusion of the *Lympha* out of its vessels, that are
 distributed through the habit of the body, and ob-
 structed, and then broken: Among which they are not
 in the last place, which possess the upper part of the
 Arm to the Shoulder, and sometimes afflicth the Neck
 also: To which also may be referred those that stick
 in the hips, and counterfeit the *Sciatica* pain, and hin-
 der walking. Some of these pains will endure the parts
 affected to be covered with many cloths, and kept
 warm; others are exasperated with covering, there-
 fore they give way, and are cured with more diffi-
 culty than the former. They arise commonly from
 external cold, that pierces those parts, as they are
 in a sweat, and often lie bare in the night, and that,
 after Phlegm is coagulated in the Lymphatick Ves-
 sels, and an Obstruction, and then a breach made in
 them, produces according to the diversity of the
Lympha, divers Aches, and such as give place onely
 to various medicines. For a *Lympha* that is sharp,
 causes more gnawing pains, and such as yield onely
 to aromack Oils and Unguents. But one that is
 more briny salt, breeds pains that will not yield to
 aromack Oils and Unguents. The obstruction of
 these Vessels will be prevented by taking care that
 the Body grow not too hot; if this cannot be pre-
 vented, by having a care, lest by keeping the breast
 open it cool on a sudden, and by consequent the
 Phlegm that is in fusion, and diffused every way, be
 strongly concreted and coagulated in several Vessels,
 and therefore in the Lymphatick. The same ob-
 struction may be cured, if, as soon as ever these
 mentioned causes have obtained, and there is any
 fear that they have done any mischief, an attenua-
 tive and inciding Sudorifick be taken either all at
 once, or at several times. The Lymphatick vessels,
 when broken, will heal of themselves, after they
 are freed from obstruction, as we see it falls out in
 blood vessels, for the proper aliment of every part
 is indueed with a conglutinating faculty, because
 more or less tenacious and viscous. Aches arising
 in the Limbs, and especially in the upper part of the
 Arm, that are most troublesome at night, after the
 redundancy of the ferous humour, if there be any, is
 diminished by Hydragogues and Sudorificks also,
 may be taken away by anointing the part affected
 with the following liniment. Take of *Unguentum Mar-*
tium,

tatum, Oil of Worms each half an ounce, Oil of Amber 1 scruple. Mix them. But if the pain be increased either by this liniment or onely with clothing, we must use this following; Take of *Unguentum Populi Nervinum*, each 2 drachms, Oil of white Lilies 3 drachms. Mix them. But if the same pains affect the Hip, and have so seized the lower part of the Spine especially, that the Body can scarce be reared upright, and moved, *Balsamus Sulphuris Terebinthinatus* is most excellent, if the part affected be anointed with a few drops of it, with which in one night I have cured several miserable persons.

Fr. Sylvius.

VII. A Woman lay ill of a violent pain about her Hip, caused by a fall, anointing with Oils gave her no ease. By chance I had some Melilot Plaster ready, I ordered it to be spread on a cloth, and to be applied about night: in the morning she could rise, and sit at the Table, whereas before she was not in the least able to stir her self. I have several times applied the same to people that have got aches by a fall, and with success.

Thonerus, Observ.

VIII. When the same woman was troubled with a great pain about her shoulders, shooting through her whole right arm, caused by a deep scarification, the Knife being thrust deeper in than it ought, when other things would do her no good, she used this: Take of Oil of Earth-worms half an ounce, Badger's grease, Fox-grease, each 2 drachms. Mix them. Anoint the scarified places: And rub the arm with water distilled of Swallows and Castor hot.

When the same woman was tormented night and day with a violent pain in her right arm, beginning at her shoulder, and extending it self all over the arm with a swelling, and she could not lift it up; in a few days the pain and swelling were dissolved by the following means; Take of *Emplast. Diacaleit.* 1 ounce, Melilot half an ounce. Mix them. Spread then on a cloth.

A Maid being tormented with a pain in her right arm, was cured in one day with a Plaster of Gum *Tacanabaca*; as several others where the cause was not hot.

M. N. was tormented with an intense pain in her Loins caused by a Defluxion; Take the crum of a white loaf, steep in Cow's milk, then passed through a brais sieve, adding Yolks of Eggs, and fresh butter, and the following Oil; Take of Oil of Chamæmil, Dill, white Lilies, each 2 ounces, oil of Earth-worms 1 ounce and an half: Of which take what is sufficient for once, and apply it hot with a cloth. She presently found ease.

A Widow 70 years of age had a violent pain in her loins. Take of Ointment of Marshmallows, *Anodyn.* each 2 scruples, fat of a Rabbet 1 drachm and an half, Oil of Scorpions 2 drachms. Mix them. The pain presently ceased.

In Aches of the arms and feet I have often found fresh Cows dung with Oil of Roses doe good.

A Woman with Child was tormented with a kind of convulsive pain in her thighs. Take Oil of Swallows with Castor 1 ounce, Treacle water, Cephalick water, Spirit of Lily Convall, each 2 drachms. Mix them. Chafe it warm. She was quickly well.

A Woman was troubled with a racking pain in her right Arm, from her Shoulder to her Fingers ends, so that she cried out: Take Oil of Earth-worms half an ounce, Fat of a Man's Skull, of a Badger, each 2 drachms; mix them. She was quickly restored.

A Noble-man was cured of a chronical pain in his right arm by applying *Oxyroscum* Plaster, having used other things to no purpose.

Two great men who had been long afflicted with a violent pain in their Shoulders, were at last cured with this remedy; Take Soap, dissolve it in *Aqua vitae*, and apply it.

This cured a Woman of a violent pain in her feet; Take of *Unguent. Alabastr. Anod.* each half an

ounce, Oil of Worms 2 drachms, Camphire 2 grains; *Idem* mix them.

IX. In mitigating and driving away all pains of the nervous parts coming from a cold cause, and from Contusions, Balsam of Peru seems to have the prebeminence, because of its amicable and peculiar faculty in strengthening the Nerves, and dissolving any inherent matter. A woman, after a Palse in her left side, was tormented with a very bitter pain all over her Chine, and in the Knee and Toes of her left Leg, and had a kind of convulsive motion in them; but she was quite rid of her trouble in three or four times anointing. A Merchant was troubled with a very grievous *Sciatica*, and when other Ointments were in vain, he anointed the place affected with this Balsam hot, to his great comfort.

A Maid had pricked her right hand with a spindle, after the Chirurgion had cured the wound, she was much pained, and when other Ointments did no good, she was cured by anointing with this Balsam.

When I felt some trouble from a Contusion of my right Hand, which lasted above a month, it went away at thrice anointing.

Medicines especially made use of by eminent Physicians.

1. Fat and Marrow, if they be converted chymically into Oil, are accounted a present Remedy to ease pains. *Pet. Joh. Faber.*

2. An excellent Oil to allay all pains in children: Take Oil of Dill, Chamæmil, each 6 drachms, Rue, liquid *Styrax*, each 3 drachms, powder of Cummin-seed 1 drachm and an half. Let them boil up once. Strain it, and keep it for use, wherewith the pained place may be anointed. *Leon. Fabelius.*

3. *Sulphur vitrioli Anodynum* is an excellent Anodyne; Take of Hungarian Vitriol what is sufficient, boil it in distilled water for an hour, throw in pieces of plated Steel, boil it for an hour, so an excellent Sulphur will be extracted from the plates; brush it off with a brush into hot water, it may be repeated to a total extraction. Edulcorate this Sulphur with Rose-water, and keep it. The dose is three or four grains, with Syrup of Popies; it assuages all pain, and causes sleep. *Joh. Phlegmund. Rheum. melius.*

4. Take of the second rind of green Elder boughs scraped off with a Knife 1 handfull, boil it in sweet Oil with water, to the consumption of the water; when it is strained add a little Wax to it. Make an Ointment. It assuages all pain caused by Blisters, and is an excellent remedy. *Observ. Rivierio com. munit.*

5. *Lapis Prunelle* dissolved in some liquor, as in Nightshade water, is of great efficacy in assuaging any pains, whose true cause is inward or outward Inflammations. *Rollicke.*

6. *Sanctorius* in his Commentary upon *Avicenna*, for easing the most violent pains, when digesting Anodynes have been applied to no purpose before, touches the part pained with a Bladder full of cold water, quickly, and removes it again without any delay, and repeats this three or four times, and so he writes, the pains are eased.

Dysenteria,

Dysentery, or, The Bloody-Flux.

The Contents.

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 Medicines.

I. Letting of blood is called into question by many: 1. Because no mention is made of it either by Galen, or the Arabians. 2. Because when the Belly is loose, blood must not be taken away. 3. Left Cholera should grow fierce. But Trallianus and Aetius let blood, whom others follow, and deservedly; because when it is indicated and permitted, blood should be let. The Indication is, Blood offending either in substance, quantity or motion: The Permittent is strength to bear it. As to the Arguments, 1. The first concludes nothing. 2. Vallesius says, that Galen's Maxime, When the Belly is loose, &c. has killed more than it has cured: For when one evacuation is the cure of another evacuation, it should by all means be permitted; but not when it is critical. 3. Sharp and bilious humours forbid indeed a great quantity of blood, but not bleeding at all. Others reject Blood-letting, because bile rather offends than blood. 2. Because it conduces nothing to the cure of an Ulcer. 3. Because by watchings and fevers it farther casts down strength, which is already weak by often going to stool. 4. Because when the Belly is loose, it is not lawfull to let blood, according to Galen. But it is the opinion of the skilfull, when there is a Fever, and an

Fortis Conf.
26. cent. 2.

inflammation of the Intestines (accompanying the Ulcer for the most part) that blood should be let in the beginning of the disease, before the strength be any more wasted with the Flux; for by means of Phlebotomy the sharp humours and blood that run violently to the Intestines, are drawn back; and by it fear of an inflammation is removed, pain is eased, the Fever extinguished, the heat of the Liver abated, and the evil disposition removed. As to the contrary reasons, 1. Blood does not always offend as a principal cause, but ever as an assisting cause, and without which the Flux could not be, which faults Blood-letting helps. 2. Blood-letting draws away the humours that run to the ulcerated place. 3. It must be celebrated in the beginning before the strength be much wasted. 4. Blood-letting hurts some Fluxes, and any that has much spent a man; but this not at all, if performed in the beginning. ¶ Vallesius de Taranta says thus: A very old man had been miserably tormented with a Bloody flux for three months, and when I was called into consultation, I, contrary to the opinion of all the other Physicians, ordered him to be let blood, and he presently recovered. ¶ I. C. Claudius says he can safely swear, that in an epidemick Dysentery in his time, he saved several mens lives by this kind of remedy, and hastened their recovery.

II. They that suspect a Vomit, rely upon Hippocrates his opinion in Coacis, where he says, that in dysenterick persons choleric vomiting in the beginning is a grievous evil. But there he speaks of a spontaneous vomiting, which is bad indeed, because it is symptomatick, and denotes the disposition of a fierce humour, the notorious disorder of the Bowels, the weakness of the retentive faculty, and some hurt in the Stomach, which is co-affected: But a vomiting caused by art may be convenient, if the Patient have an inclination to vomit, and the humours stagnate in the Stomach; for revulsion is made from the part affected. Hippocrates himself, l. de affect. n. 2. advises vomiting, When, says he, you have purged the head, give a medicine in drink, which purges Phlegm upwards. ¶ Amatus follows him, centur. 2. curat. 44. in Scholio, where he says; If a Physician could retract upwards the bilious and sharp humour, that runs to the Intestines, and breeds the Bloody-Flux, and could evacuate it by vomit, doubtless it were a foolish thing, and contrary to Galen's rules, to carry the matter through the Intestines, which are full of Ulcers: But when the Physician is not able to attain this, yet he ought to endeavour it to his power, and consequently effect it by purging Medicines. ¶ Mercatus confirms this in these words; You must translate the humours to another place by blood-letting, purging and vomiting, especially in salt phlegm; for by this way I have seen long Dysenteries cured.

III. A young man twenty years of age, about the end of August, 1643. had been sick of a Bloody-flux for twenty days, which he had taken no care of by any Medicine, till being brought to an Hospital, he took, by the prescription of the Physician, a drachm of Salt of Vitriol dissolved in water: He vomited much phlegmatick and cholericke stuff, and so revulsion was made of the humour flowing to the Intestines, and he was cured by this onely remedy.

IV. Why should any man purge in a Dysentery? Will he not draw excrements to the part affected? Certainly he must. In the mean time therefore does he not doe harm? Undoubtedly; yet purging preserves many from a malignant Dysentery, timely carrying off great plenty of juices: Because the Guts are much more exulcerated, while the excrements flow to them by little and little, than when a great quantity runs through them at once. Therefore purging does not take away the danger, which is impending from the juices themselves, but what attends their tarrying and slow Flux. For this reason, if a purge must be given in a Dysentery, it must be done quickly, because when the disease is far gone, it will be undertaken in vain. Nor yet may we use this kind of cure in all Dysenteries, for it has something of rashness in it to call all the excrements

Riverius.

Vallesius, l.
2. Sect. 6.
Epidem.

crements to that place, whither, to the Man's great hurt, they flow of themselves; but then onely, when a malignant Dysentery is imminent, and when no other moderate cure, which is performed by deterfives and astringents, seems sufficient. ¶ What occasion there may be for Purging, I will tell you in short, Either there is in the Dysenterick person with a great Cacochymie no great exulceration: Or with a great exulceration, a small cacochymie: Or both the cacochymie and exulceration are small: Or both great. If the first, he should be Purged: If the second, not; but should take Diureticks, Sweats and Vomits, and the Ulcer should be cured by Topicks inward and outward: If the third, there is no need of Purging, nor much of local Medicines; but of a good diet, and some gentle evacuation and derivation. If the fourth, it is incurable; and you must either do nothing at all, or onely for trial's sake, as in a desperate case. For such cures have sometimes succeeded: Nor am I against that of Celsus; Oftentimes whom Reason could not help, Rashness has helped.

Idem.

V. If a Man be averse to Purging Medicines, or for some reason be willing to use them; yet the Flux must by no means be stopt presently: It is better for some days to wash the Guts with Broth of Fresh-meat, Capons, Hens, &c. to which may be added Oil Olive, or of Sweet-almonds, or fresh-Butter. Such Broths nourish much, wash and cleanse the Guts, and mitigate pain, with addition of the Yelk of an Egg or two. When the Patient has used these Broths four or five days, then he may have recourse to things that stop the Flux.

Hildanus, l.
de Dysent.
ris. c. 8.

VI. *Joh. Matthæus Faber*, among many learned observations, hath this one that deserves notice, That in long *Diarrheas* and *Dysenteries*, the Guts are made as thin as Cobwebs; wherefore, in the cure of such Symptoms, the time should be diligently attended: For in the beginning he thinks a Man may Purge with Rheubarb; but if the Flux have continued long, he thinks we should abstain from such dry Purgers. But if perchance a Physician, relying on that indication, will so perform the cure, Tamarinds and Syrup of Roses are sufficient for that; otherwise driness is increased, and disease added to disease.

VII. A Dysenterick Flux must not presently be suppressed, but the humour that cleaves to the intestines, and frets and exulcerates them, must be presently cleansed and evacuated, before the intestines be worse hurt, and a greater exulceration follow; which cannot be better done than by Rheubarb. Yet we must observe if the vitious humours be too much fermented, and in violent motion, and there be fear lest they be irritated by the gentlest lenitive, and should fall with more violence on the part affected, then Rheubarb does no good, but sometimes casts the sick persons into certain hazard.

Frid. Hoffmannus.

VIII. *Augenius* steeps Rheubarb in Plantain-water for a night, in the morning, after he has strained it gently, he throws away the Infusion, and gives the substance in Syrup of Roses, Whey, or the like, with good success: for so he says, the heat and attractive virtue of the Rheubarb are qualified. ¶ Rheubarb by vehement toasting loses all its Purgative virtue, and contracts an *Empyreuma*: But if you desire its more astringent virtue, you must make use of the part remaining after extraction of the Tincture, with Cichory or Plantain-water.

Idem.

IX. If the Dysentery be far gone, and there be a Fever, we must proceed cautiously in the use of Purgatives. Therefore 6 drachms of Cassia, with 3 drachms of Pulp of Tamarinds must be given presently, after which two pound of Goats-whey, prepared, must be given. Nor need we, with *Forestus*, fear the fowrness of the Tamarinds, as irritating the Ulcer, because it is restrained both by the

Cassia, and the Whey, as *Hernius* has considered, *Forst.* and in the mean time it binds and dries the Ulcer.

X. Some question whether *Cassia fistula* may be made use of to Purge withall? Some are against it, because it is lenitive and moist, and so fitter to increase the flux and the disease than to cure it. Besides, as *Mesues* writes, it hurts them that have weak Intestines: Moreover they add, that at this time there are safer Medicines. But we may expect several advantages from Cassia, which we cannot have from other things; for it is a lenitive Medicine, but not such an one, as makes the matter more liquid, for it voids the excrements hard. Besides, as *Mesues* says, it breaks the Acrimony and heat of the Bile and Blood, and their Inflammations, and it allwages the pain of the Inflammation: for there must always be an Inflammation, sometimes greater, sometimes less, because there is one in all Ulcers. And if Milk be commended by *Hippocrates* and *Galen*, this must needs doe much better, especially if we add any thing that dries, such as are Plantain-seeds, washed Hartshorn, and other things. Now it is said to hurt the Intestines, because it is moist and slippery, which does no harm in a Dysentery, in which, by reason of bile and acrimony, the Intestines are dried and parched; wherefore it may doe good, especially as it makes a fence for the Intestines, and by gently Purging cleanses the filth from the Ulcers: Which will succeed so much the better, if for drying up the Ulcers, we add drying Powders and Medicines, such as Syrup of Roses (you may put in Tamarinds, that are cold and dry) and the Cassia may be given in less quantity.

Rubeus in
Celsum.

XI. The Dysentery must be attributed both to the abundance and sharpness of bile (caused by the heat of the Air, as also a bilious *Diarrhoea* has for the most part its rise from thence) and to the sharpness of the pancreatick juice, caused partly by the too much use and abuse of the like things, and partly by the subsequent coldness of the Air in the Month of November. For in a Dysentery the Intestines are Ulcerated and fretted, and there is a plentiful excretion of blood, but especially of Pus: Therefore it must be produced by such a cause as is naturally apt to fret the Guts and cause an Ulcer; Therefore by a sharp humour. They are in an error therefore, that derive a Dysentery from Bile alone, what way soever corrupted or made sharper by it self: for after the lixivious Salt of the Bile is made extreme sharp, then indeed it will any where else, as well as in the small guts, cause a Gangrene, but never an Ulcer: for an Ulcer is an effect of an acid, not of a lixivial. Therefore, unless an acid and sharp humour be joined with the Bile, it will never cause a Dysentery, which onely an acid and sharp humour, falling upon the Intestines, can produce. Hence, because the abundance of this acid had its original, sometimes from acid Medicines used preposterously, and in too great quantity, sometimes from the extreme sharpness of the Air in the Month of November; these things conduced to its cure. 1. The avoiding of the cold and sharp air. 2. The use of Medicines, that concentre and soak up an Acid, as Coral, Pearl, Crabs eyes, Chalk; and for the quicker healing of the fretted Guts and Vessels, Dragons-bloud, Bloud-stone, &c. 3. The cleansing and healing of the fretted Guts, by Clysters made of Cows-milk, Venice Turpentine, Yelks of Eggs, and Honey of Roses, given frequently, and kept as long in the body, as conveniently they may, that they may doe the Patient the more good. For which purpose new Treacle, *Disfordium*, &c. may be made use of.

Sylvius, Ap-
pend. Tract.
10. Sect. 25. §.
772.

XII. In the opening of several Dysenterick persons, Blood has onely been observed in the thicker guts, and not in the smaller. And why onely in the thicker and not in the small? I believe for no other reason, than because the corroding humour

easily passes from the upper Intestines, wherefore no excoriation or corrosion can be caused there, as it happens in the thicker, especially in the Colon, where especially the morbidick humour stagnating because of its turnings, corrodes its coats unmeasurably. Therefore I judged absterfive Clysters, and Spaw-waters very good, and I found them so; with respect nevertheless to, and not neglecting the morbidick cause.

Panaeolus,
Fene. Labf
9.

XIII. In the Bloody-flux, many at the very first use Clysters of a boiled Sheep's-head, whereby, no doubt, the Ulcers grow foul, which makes them worse. It is better to begin with absterfives, and by degrees proceed to astringent and glutinous Medicines: for fat are made use of in respect only of a Symptome, that is, Pain. Galen takes notice of it 12 Meth. When the Stools in a Bloody-flux are very fretting, we give a Clyster of juice of Tragum, or Goat's Sewet, or Ointment of Roses; by which means certainly the exulceration in the Guts it self is not cured, especially if there be any thing putrid in them, but ease is given. And this is to oppose the Symptome and neglect the disease for a while. In which Discourse, not onely they are reprehended, that use mere fat things, but they that mix Goat's-sewet with other things, when there is no pain; and they also that think Sewet dries. ¶ Augerius Ferrerius Castigar. c. 25. reckons Yelks of Eggs among fat things, with which, and with fat things any Inflammation is increased. ¶ Crato in Analogismo gives a caution concerning Sewer, that no Physician ever use it without Oil.

Mercatus.

XIV. Astringent Clysters are not so safe as Potions, wherefore no man may rashly mix astringent things in Clysters; because by the use of them, the things that fret the Guts stick closer to them, and now and then make the exulceration and the Torment greater.

XV. In all fluxes of the Belly, much of the innate heat goes out with the excrements, whence it comes to pass, that the Stomach is cooled, and the concoctive faculty spoiled. Nor can it be doubted, but that in a Bloody-flux, by frequent injection of cooling Clysters, the Stomach also must be much cooled through its continuity with the Guts: Which thing the multitude of flatulencies and crudity of Excrements declare. Therefore the Ancients, in the Bloody-flux, added to their astringents, heating and concocting Medicines, as Wormwood, Mint, Castor, Mastick, &c. or such things as might preserve the innate heat from being extinguished with cold things.

Aug. Ferrerius.

XVI. As a hasty and over-much use of Astringents is hurtfull, the flux of the humours being unseasonably stoppt, and the body made costive, whence a perpetual costiveness and driness thereof usually remains; so a seasonable use of them is altogether necessary, to the end the rheumatick disposition remaining may be taken away, and the retentive faculty, the weakness whereof upholds the Flux, may be strengthened. But we must use them upon these conditions. 1. According to Crato's advice, before the seventh day they must neither be used inwardly nor outward, till the Ulcers of the Guts be first well cleansed. 2. Sometimes we must chuse cold things, sometimes hot, according to the nature of the Humour. 3. Coolers must be corrected with things that are hot and help concoction; for by the continual Flux the heat of the Stomach and Guts is diminished; the crudity of the excrements is a sign of it. 4. They must be given in a small dose, but often; first, lest the Flux should be staid too soon, and that the virtue of the Medicines may more easily be exerted by nature: Next, lest they should be washt away by the fluent humours, before they exert their virtue. 5. We must begin with the gentler and weaker sort, as Syrup of Quinces, or compound Marmalade of Quinces. Hartman says, we must observe in general, that no Flux must be stoppt on a sudden, except in a Phthisick or Peripneumony.

XVII. We must observe, not to use dry things too liberally in dysenterick Clysters, such as Dragon's-bloud, Coral, Trochisci albi Rhafis, and de Spodio, for they cause greater pain, and oftentimes a new Flux: But if any Man have a mind to use such things, let him chuse Unguentum album Rhafis, or Unguentum ex Pompholyge, or such things as are dry and clammy, as Bole Armenick, Terra Sigillata, Starch, &c.

Mercatus, de
Indicat. l. 1.
c. 31.

XVIII. Some put Opiates in dysenterick Clysters, but amiss; for Minadous, a Doctour of Padua observed, that all those, who by the advice of their Physicians, used opiate Clysters, died; The reason is, Because Ulcers of the Guts are rendred more putrid and filthy by Opiates.

Frid. Hofmannus, m.
m. l. 1. c. 10.

XIX. There be three degrees of deterfiv Clysters. The first is of such as are made of Wine and Honey, with Barly-water and Honey of Roses. 2. Of salt-water, with Sal Gem, and Honey of Roses. 3. Of Brine, adding some Egyptiacum also, if the Ulcer be foul and spreading. And although the use of Brine may be questioned, considering the example of that Physician, who cured all dysenteries by the use of Onions and Clysters of brine, and killed them with Convulsions, for he was without method: yet in a spreading and putrid Ulcer, not onely Brine, but even Causticks are convenient, as Galen advises 9 per Loca, if it be also callous. However Caution must be used in giving Brine and Causticks, with the observation namely of three conditions. 1. In full strength. 2. Not without Narcoticks mixt therewith, after Galen's manner. 3. That the Clysters be not kept above an hour, as Aetius advises.

Gal. 12.
Meth. 1.

XX. Concerning the use of all Clysters, we are wont to observe the abundance of their matter in deterfiv and washing ones, the smallness in drying ones, mediocrity in tempering ones, and shortness of time in Causticks: And then the successive use of them, so that a drier may always follow a deterfiv one, and then an Anodyne, if pains be urgent.

Foris, cons.
sult. 83. cent.
2.

XXI. This one thing, and that of great moment, must not be omitted, that sometimes dysenterick persons retain their excrements several days; both because Pain and Watching, Symptomes familiar to this Disease, dry extremely: and because astringent Medicines, which we make use of, to stop the Flux, render the Belly so costive, that the Excrements are retained a long time, to the great damage of the Patient, although the Belly void bloody matter often flowing from the Ulcer, which indeed has been observed by no man as yet. Wherefore, in this case, at certain intervals of time we must evacuate downwards, either by loosing Clysters, or by some gentle Purging Medicine.

Idem ibid.

Zecchius,
consult. 37.

XXII. D. Pilonus never cured a Dysentery by Astringents, because he observed that all who had it so stoppt, either relapsed, or fell into a Fever or Pleurisie. Nor did he use Sudorificks, because he thought they increased the heat of the part transmitting; and therefore he cured this Disease onely by Lenitives and Blood-letting.

Velfchius.

XXIII. In a Dysentery from salt phlegm falling from the head, we must act cautiously about astringent remedies: for when these Dysenteries are protracted beyond fourteen days and more, there are not wanting Physicians, who think astringent remedies may be safely administered beyond the fourteenth day. But they are in a great error, for a Dysentery from salt phlegm may remain as long as the intemperature of the head, which breeds the salt phlegm, and sends it to the Guts. For a year ago I cured two Patients, who fell into blear-eyedness, and intolerable pains of their joints, upon the unseasonable use of an astringent remedy administered in a Dysentery from salt phlegm. Therefore, in this case, revulsion of the humour should be made to the nostrils, and the head before or behind, by Cauteries, Sinapisms, or Cupping-glasses: The intemperature of the brain must be altered, and then Astringents may be used.

Saxopia.

XXIV. I

XXIV. I do not disallow of astringent Powders, whether of Roses, *Acacia*, or Pomegranate-flowers: But if any one fear their sharpness, he may take *Terra Lemnia*, *Samia*, or burnt Hartshorn; they dry without any sharpness, and bind moderately. I put more confidence in these powders than in Pills or Bolus's, which sometimes in a Bloody-flux I have seen voided with the Excrements whole and unaltered.

XXV. Chalybeate-water, Milk and Wine are not plainly to be rejected, since either some coagulating Spirit, or some astringent scalings of the Metal that stop the fluid humours, are communicated to the liquor: Yet I would, with *Platerus*, have this extinction moderate, and not too often made; since it is certain, if much of the substance of the Iron be taken, it loosens the Belly; nay, if it be taken plentifully, it causes Vomit also. And Steel must be given much more sparingly in a Dysentery, than in a chachexy, or obstruction of the Bowels; because there is need onely of some small astringent, and of no other effects of the Steel in this case. Nor is there any difference between fresh Steel, and that which has been often quenched. The parts indeed of Iron, that are communicated to the liquor, at its first heating, have a power to Purge: But because Steel is of an homogeneous nature; all its parts have the same virtue; and the more of its substance is communicated to the liquor, the more it Purges or Vomits. Nor also is there any necessity to cast away the first water, unless perhaps the Steel be not clean, but have got some rust on the out-side: for seeing this in the extinction may be communicated to the water, it may not be improper to throw it away. And I have thought good to advertise this, that these chalybeate liquours must be used when they are fresh prepared, especially if heated Steel have been often quenched in them: For the substance of the Steel in the beginning, and presently after extinction, retains the nature of the Scalings; but if it remain long in the liquor, it is turned, as it were, into rust, and then its faculty is rather to Purge, Vomit, and put the humours in motion, than to stop them. An instance whereof chalybeate Wines do give; that are given for obstructions of the Liver and Spleen, which if they be taken in any quantity, Vomit and Purge: For they are not given presently after the Steel is put in the Wine; but they are set in the Sun, or some hot place for some days, and shaken together, that the Steel may the better be dissolved. But if the question be about giving *Crocus Martis*, or prepared Steel in a Dysentery, I should rather use a *Crocus Martis*, made by the benefit of the fire onely, and reverberation: For it has not as yet got so vitriolate a Nature; but to acquire it, there is required another resolution, and therefore it excels in an astringent virtue beyond any other. All other preparations of Steel, whether they be infusions of prepared Steel in Wine, or in any other liquor, or solutions with *Aqua fortis*, Spirit of Vitriol, Sulphur, or distilled Vinegar, all of them favour more of a Vitriolick nature, and the *Crocus* this way prepared do participate something of the dissolving liquor, and have united the salt of the Vinegar, or the *Aqua fortis* to themselves. And therefore, although they have some astringent, and strengthen the tone of the lax Bowels in cachectick persons; yet because the faculties of opening, fusing and melting the humours, and if they be taken in any quantity, of Purging and Vomiting, prevail in them, they have no place in a Dysentery, but rather in obstructions of the bowels, and in cachexies. For seeing all the parts in these preparations, into which Vitriol may otherwise be dissolved, are not separated, but are like Vitriol separated from the gross earth, and a little calcined, and therefore the Spirit of Vitriol is as yet mixt with the Salt in them; it is no wonder, if they open, and sometimes Vomit

and Purge, since it is the property of Salt of Vitriol to doe so. And if we may give *Crocus Martis* thus prepared at all, the dose must be very small, lest it gripe the Guts by its Acrimony, or Vomit, or Purge, as it happened to an Empirick in *Forelius*, l. 4. obs. 4. in *Sebbio*.

XXVI. After evacuation presently alteration and contemperation of the bilious humours must be procured; which is of such efficacy in curing a dysentery, that it put *Anatus* into admiration, how a certain young Man, in a dysentery, could be cured onely by a draught of cold Water, which he drank without the advice of his Physician. But we may cease our admiration, if we observe, that *Celsus*, 4. 15. proposes cold Water as the best remedy for a Bloody-flux. But here decoctions of Herbs and Juices, Whey, Spaw-waters and Milk are proper. Take of the Decoction of Endive, Lettuce, Violets, Plantain, Purslane, 5 ounces, of clarified Juice of Plantain, Purslane, each 1 ounce. Mix them. Give it for five or six days; or, Take of Water of Lettuce, Water-Lily, Plantain, each 2 ounces, Seeds of White Popies 2 drachms. Make an Emulsion, to which add of Juice of Quinces 1 ounce, *Diamargariton* *Fortis*, *frigidum* 1 scruple. Mix them. For we must abstain from Sugar, as also from Honey.

XXVII. *Galen* against *Herodotus* declares sufficiently, what harm the unseasonable use of astringents does. It is suppressed indeed in the declension of the disease, and lest the matter being turned upon some noble part should injure it, astringents are ordered with Spices mixt therewith, and things that provoke Urine: for so the humour being diverted to the ways of Urine, the Ulcers may heal the sooner. And as far as I could ever learn by experience, I have observed some, upon stopping a dysentery unseasonably, fall into an Epilepsie; others into a Pleurisie. And one, having the matter turned to his hands, had them full of filthy thick scabs. Some were so bound with astringent Medicines, and their Guts so dried, that afterwards they scarce went to stool once in four days. ¶ In the year 1659, there was an Epidemick Dysentery up and down *Switzerland*; one *Bedor* his Wife was taken with it in the Village *Courcelles*, in the Province of *Newemburgh*, she had recourse immediately to astringents, by the use whereof it was stoppt; but, the humours falling back upon her right knee, it continued swollen to her dying day.

XXVIII. A very painfull dysentery had afflicted two well-grown Virgins for several days, at divers times; by reason of the Guts being exulcerated with yellow choler mixt with salt phlegm. At first they had large, frequent, liquid and various stools, mixt afterwards with a sort of Fat, which were followed by caruncles, or bits as it were of flesh, plainly to be seen in their Excrements. Yet both of them escaped by my assistance. Among other things, liquid Balsam of *Peru* was very successfull, mixt in Clysters, to defend the exulcerated Guts from the sharp and putrid excrements, and to heal them. I have also experienced the singular virtue of this most noble exotick liquor, as well in immoderate *Diarrheas*, as in Bloody-stools, when other things would doe little good. And truly the effect of it was admirable in a young Man, who was most barbarously tormented with most cruel Gripes, a sanious sinking Matter coming out with the Excrements, an argument of an Ulcer in the Guts: And these Gripes could no ways be mitigated, till I ordered the following Clyster to be given him, and moreover half a scruple of the same Balsam, mixt with Pine-Nuts, adding of Syrup of Orange-Pill 2 drachms, and refined Sugar half an ounce. This was the Clyster; Take of the root of Tormentil, Comfrey, each half an ounce, Leaves of Plantain, Shepherds-purse, Horse-tail, red Mint, each half an handful, Flowers of Red-Rose, Pomegranate, Rosemary, each 1 pugil, Seeds of Sumach 2 drachms.

Lucas Scroec-
kius, Ephem.
Germ. ann. 3.
p. 126.

Boil them in a sufficient quantity of Spring-water. In 7 ounces of the Colature dissolve of Sugar half an ounce, Balsam of Peru dissolved with the Yelk of an Egg 1 drachm, Juice of Plantain fresh drawn 1 ounce. When the Patient found present ease, two hours after I ordered it to be repeated.

XXIX. Since some commend the use of Milk, and others forbid it, it is certain that it has been given sometimes with good success, sometimes with bad: For *Amatus, cur. 44. cent. 2.* says, he once accounted it poison. *Hippocrates 5. aph. 64.* affirms, it is hurtfull to several persons. *Saxonia*, on the contrary, in *præl. pr.* affirms, that he has not only taken away pains, but has cured Dysenteries at the first without any other help. Nor are reasons wanting, for Milk especially allays the heat of Choler, takes off Acrimony, and allwages the heat of the bowels: As it purges downwards, it carries off cholerick filth. But this or that preparation, or this or that constitution of a disease renders it wholesome or unwholesome. Milk consists of three substances; of Cheese, whereby especially it nourishes, and plasters the Ulcerated Guts; Of Butter, whereby it eases pain, digests, anoints the Guts, and fences them against sharp humours: Of Whey, whereby it is absterfiv and cleansing. In many respects therefore it is proper; as it serves the turn both for food and physic: Yet the use of it must be circumscribed with several cautions. In the first days therefore, it must be used raw and new milked, that the choler may be drawn downwards, so *Ætius* advises: in the progress of the disease, that the flux may be stoppt, it stands in need of preparation; and the Whey, which has the deterfiv faculty, useles at that time, must be consumed by boiling Gold in it, or quenching Flints and Steel therein; so also the fat and igneous parts, prone to turn into choler, or to purge, are dissipated. But if the prohibiting Symptoms proposed by *Hippocrates 5. aph. 64.* attend a dysentery, as Head-ach, Thundring, Hypochondriack Meteors, a high Fever, a flood of Choler flowing in abundance, we must abstain from Milk, or a fourth part of Rain-water must be added, and given, after it has boiled a little, mixt with a little Honey, lest it corrupt on the stomach. Thus prepared, it may, according to the opinion of several, be given innocently, when these impediments are present. Note, the greatest part of the Cacochymie must be carried off by Purges, before the use of it. ¶ *Hor. Augenus* says, that is the safest way of giving it, and one that never fails, which *Ætius* proposes, which nevertheless he uses not for purging in the first days, because we have other very safe Purgers, much safer than the use of Milk: But he commends it in the progress of the disease, pouring into it, as it boiles, a fourth part of Water; and that for three days: For the next three days he boils the Milk a third part, or half away: When there is a Fever with it, he says all inconvenience may be corrected by mixing Rain-water with it. ¶ Milk may be given notwithstanding bilious stools, or a Fever, if so be most part of the choler be purged away; onely the inconvenience must be taken away by boiling it with Plantain-water, or by quenching red-hot stones, or Gad's of Steel in it; for it is imbued with a faculty, that dries and resists corruption; and if the Fever be not great, it hinders not the giving of Milk: for this is allowed by *Hippocrates 5. aph. 57.* to those that are not in a high Fever. He also, 7 *Epid.* gave it to *Critolaus* his Son, who had a Fever and cholerick Stools, and recovered.

Fortis, com-
sult. 93. cent.
2.

XXX. This must be remembred, that all Medicines that are made of *Opium*, Henbane, Mandrake, or black Poppy, are suspected for this reason, because, although, they seem to ease pain, and therefore to strengthen the bowels; yet the humours being gathered together, are afterwards voided without intermission; and the head being made

heavy, and the strength wasted, they put the bowels in a worse condition; Wherefore, according to *Trallianus*, they should be avoided, except pain or watching do of necessity require them, for then you may have recourse to *Philonium Persicum*, or *Romanum*, which yet may more innocently be mixt in Clysters. ¶ The want of Opiates rightly prepared has rendred Narcoticks hitherto suspected, but the successfull use of well-made *Laudanum*, in several diseases, has forbid the abrogating of the use of Narcoticks. *Riverius* in his Practice, says, That Narcoticks taken by the mouth sometimes doe wonders, they ease pain, stop a flux, cause sleep, and so likewise recruit strength: But they will be much more proper, if they be mixt with astringents and strengtheners. With what success he used them, several of his observations testify. ¶ *Horstius, l. 11. obs. 3.* shews the efficacy of *Laudanum*; It is known, not onely what gripes, but even exceeding bloody stools, kindly Dysenteries do sometimes cause, whereby many would pay Nature her debt, were they not succored by the use of Opiates: Which a Noble Woman the last year confirmed; who, in the judgment of all that were by, was reduced to the last extremity; but was so refreshed with 3 or 4 grains of our *Laudanum*, that in a short time she recovered.

Zecchiu,
consult. 27.

Aug. Thone-
rus, l. 3.
obs. 10.

XXXI. *Thomas Minadous*, a Physician and Professour of Italy, affirms, that he observed, all died of the Bloody-flux, who by the advice of Physicians, took *Laudanum Opiatum*: And that after the use of it the Ulcers grew more putrid and foul, from the long stay of the purulent matter and noxious humours. Let this therefore suffice for a Caution.

XXXII. As in the cure of a Dysentery, for Revulsion sake we use frictions and ligatures of the upper parts; as likewise we endeavour to cause Sweat, and sometimes provoke Vomit; So also, according to *Galen's* Doctrine, we ought to provoke the noxious humours by the neighbouring places that serve to carry Urine: But we must have a care one danger do not incur another; for thence there is a two-fold one impending; the first is observed by *Celsus, l. 4. c. 15.* If things that provoke Urine, obtain their end in turning the Humour another way, they doe good. If they obtain it not, they augment the Ail. Therefore he subjoyns; They must not be given, except to such persons, as in whom they use to have their effect speedily. The other danger is, lest the Urerter places and Vessels, which are much straiter than the Guts, when the sharp juices are called thither, should be fretted and Ulcerated, and so a dysury should succeed a dysentery. The Skillfull avoid dangers by giving Diureticks long after the beginning of the Disease for derivation sake, when part of the Abundance of humours is spent, prescribing not Diureticks, but lenients with cold and moisture. *Hildanus* commends Earth-worms for this purpose.

XXXIII. I reckon I should not conceal one remedy, very familiar and successfull with me, and known and used also by several Physicians. It is this, Drinking of natural Waters, that are potentially cold: for from them we have two things: The one is the cooling of the Liver: The other (forasmuch as these Waters are in some measure astringent) is, that by stopping the Flux, they give tone to the bowels, and contribute to the cure of the Ulcer. Yet the use of them must not be indifferent: for it is not safe to give them, when the peccant matter abounds in the body: for if such matter should be intercepted by virtue of this Medicine, one of these two things would follow; either because this same matter being retained, would be turned to other noble parts, and then if it were turned to the more noble parts, it would cause mortal sickness: If to the less noble parts, it would cause less mortal sickness; yet very grievous ones: Or the matter being detained is made sharper, and gathered in greater quantity, whence sometime falling with greater violence afterwards, it is the cause of a worse Dysentery. Wherefore the time to use such Waters, is, when the matter being

being evacuated in part is less in quantity, for from them we may have with safety the cooling of the Liver, strengthening of the Bowels, interception of the Flux, and a cure for the Ulcer. But if at the beginning of the Dysentery there neither be a quantity of excrements, nor any notable pravity in them appear, they may then safely be given; for I have used them frequently, and have found the drinking of these Bath-waters so successful, that I should never desire a more effectual Remedy for the cure of a Dysentery, than them seasonably given: And I can affirm I was never frustrated of my expectations in giving them. Now I have respect most to the Stomach, which I have ever a care to strengthen and defend against the Cold; if it be very weak, I use them not at all.

P. S. Diver-
sus, Not in
Altimar.
c. 76.

XXXIV. The use of Wax in a roasted Apple is highly commended, and it is no unusual Medicine at this day. I think it was known to *Valeriola*, lib. 3. obs. 4. And although *Serapio* write, that Wax is one of those Medicines that are not to be taken inwardly; yet if it be taken moderately, it has an emplastic virtue, whereby it may heal the Ulcer, and a Lentor, whereby it may assuage it. *Dioscorides* himself, 2. 76. says it may be given in Broth to dysenterick persons. And although *Valeriola* thinks that the virtue of the Wax cannot reach the ulcerated Guts, because through its thickness and emplastic faculty it must stick in the first ways, fastning it self like Glue; yet a roasted Apple hinders it from doing so, with whose substance it is mixt in the minutest particles, and which may serve as a Vehicle to it. *Valeriola* chuses a Quince-apple, that one and the same Medicine may have both an astringent and glutinous faculty, but may be an Apple is more convenient, because it is a most apt Vehicle to carry the Wax through the windings of the Guts.

Sennertus.

XXXV. A Nutmeg is commended as highly beneficial in this Disease, because of its different qualities: By its earthy substance it binds, strengthens the Bowels, dries and causes a Cicatrice: By its oily Substance it eases Pain, smeares over the Guts, lest they be hurt by the Sharpness of the humours: By its aromatick quality it strengthens the Liver, Stomach, and the mouth of the Stomach; and dispells Wind. When because of some febrile heat any mischief is feared from its heat, it may be gently roasted in hot ashes, when you have wrapped it in Hempen-hurds, or otherwise: But it must not be roasted, as is usually done, upon a Plate of Iron red hot; not only because the oily part perishes in this manner; but by adustion it may easily acquire acrimony.

Idem.

XXXVI. *Mindererus Med. milit.* p. 246. has an elegant passage concerning Oils. He says, that Oils must be curiously excluded for several reasons: 1. Because they hinder Consolidation, you have an Instance in cutting a Vein; for if you would open the Vein again in the afternoon, you must dip the Lancet in Oil, and the Wound it makes will not close presently. The same also is done in Cupping-glasses, and it is true indeed, that Ulcers are made foul thereby, which rather stand in need of drying; and, according to *Galen*, Oils are an enemy to Ulcers, as Wine is very much a friend. 2. Because all Oils, except of Linseed, Popy-seed, Hemp-seed and Sweet-almonds, have something of Sharpness in them, but these have little of it: Which is demonstrable thus; If a drop of Oil-olive be dropt into the Eye, it will smart as if Juice of Citron or Limon had been dropt in.

Wedelius,
de m. comp.
ext. p. 87.

XXXVII. Some reckon outward Medicines useless, because their virtue cannot pass the Skin, the Muscles of the Belly and other hindrances; yea, hurtfull, because of the expression they make of the humours in the outside of the Body to the Intestines. They vouch *Galen* for their Authority, who, 1. ad Glauco. c. 14. affirms, that the closer the Skin is, the more the Flux is increased. But these People

may be opposed by experience, which often shews that a Flux is stoppt by the use of them. But as to the use of them in fat People, we must take notice that little benefit can be expected from them, because they cannot penetrate; therefore some Vehicle must be given them, as Vinegar or White wine, lest by the grossness of their parts, or their too great cold actual or potential, they stop up their own way. We must observe also out of *Ælius*, that they cannot innocently be used in a Dysentery caused by Sharpness of Bile, and in cancrus and malignant Ulcers, because they consume the watery part and leave only the biting.

Sennertus

XXXVIII. Although the word Dysentery denote the Bloody-flux; yet, without any prejudice to its Etymology, I will apply this name to this London Disease. Every year, usually about Autumn, Gripping of the Guts with a Looseness is rife. The stools are watery and as it were limpid, with a sudden decay of strength. No evacuation promoted the cure of this Disease; yea, Blood-letting, Vomiting and Purging always did hurt; and usually the proper Remedies were only Cordials, and those very hot ones, that is, such as abounded in Spirit and Sulphur, or in volatile Salt: Inasmuch that Brandy a little burnt with Sugar was the common, and as it were the epidemick Medicine, and proved always in a manner successful; although used indifferently in the other that was bloody, it was often found hurtfull.

Willis;
Pharon. ratio
scilicet, 3. c. 3.

XXXIX. Gripes in the Guts without stools begun to invade People in the beginning of August, 1669. and were as many at the end of Autumn as the Dysenteries, which entred with them. Now this Disease seizes a Man with a shaking and shivering, which is followed by a heat all over the Body (as is usual in Fevers) and quickly after by a Gripping in the Guts, and then by stools, but oftentimes there is no sense of a Fever going before. All the stools are mucous and not stercorous, except that sometimes a stercorous one is interposed, and that without any notable pain. Some streaks of blood are mixt with these mucous stools. In the mean time the Patient, if he either be in the flower of his age, or be heated with Cordials, is in a Fever, his Tongue being whitish and thick beset with slimy stuff; and if he be violently heated, then it is black and dry. His strength is cast down, his spirits spent, and there is all the tokens of an ill conditioned Fever. This Disease causes not only extreme pain and sickness, but, unless it be skilfully handled, much endangers the Patient's Life. For when the stores of vital heat and spirits are exhausted by frequent stools, before the peccant matter can be thrown out of the blood, and when Cold in the extreme parts comes upon one, the Patient will be in danger of death. Since it may so be, that various Species of Dysenteries may arise, as there are of Measles and other epidemick Diseases, proper to different Constitutions: therefore they require in some things of right a different method of Cure to themselves. That we may proceed to curative Indications. When I had diligently weighed the various Symptoms that happen to this Disease, I found it a Fever (that is, of its own kind) turn'd inwards upon the Guts, by means whereof the hot and sharp humours contained in the mass of blood, and putting it in agitation, are discharged by the mesenterick Arteries upon the said parts, and, the orifices of the Vessels being laid open by the force of the humours making thitherwards, the blood is poured out by stool. In the mean time, by the importunate straining of the Guts, which doe their utmost endeavour to expell the sharp humours, that continually trouble them, this mucus, wherewith they are naturally smeared over, is discharged together at every stool, sometimes more sparingly, sometimes in greater plenty. Therefore the indications seemed to offer themselves of their own accord, that first

I should

I should immediately make revulsion of these humours by breathing a Vein, which done, that I might moreover qualifie the rest of the mass; also that I should carry off the said humours by Catharticks. The first day, as soon as I was called, I advised the breathing a Vein in the Arm; the same night I gave a Paregorick; and the next morning this gentle cathartick Potion, very familiar with me; Take of Tamarinds half an ounce, Leaves of *Senna* 2 drachms, Rheubarb 1 drachm and an half; Boil it in a sufficient quantity of Water; In 3 ounces of it strained dissolve of Manna and Syrup of Roses solutive each 1 ounce: Mix them; make a Potion. I usually prefer this Preparation with a small quantity of Rheubarb before any Electuary; for although Rheubarb be designed to evacuate Cholera and all sharp humours; yet unless some Manna or Syrup of Roses, or something of the same nature be mixt, that it may amount to a fuller Purge, it is not very proper.

But since it is obvious enough that the most gentle Catharticks and such as will but give a stool, do encrease the Gripes and cause a dejection of spirits and an universal disorder in the Patient, namely, by the adventitious tumult, whereby it stirs the blood and humours in the operation. Therefore it is customary with me to subjoin a Paregorick a little sooner than we use to doe after Purges, that is, at any hour in the afternoon, if we think the Purge has done its work, that, namely, I may stop the motion which I set on going. Afterwards I prescribe the said Cathartick for two times more, that is, to be taken every other day. I give a Paregorick also after each Purge, at the time I advised before. Moreover, I take care that it be given morning and evening those days he does not purge, to the end I may subdue the fierceness of the Symptoms, and gain time, while I am busied in carrying off the peccant humour. After bleeding and once purging I allowed them a taste of some temperate Cordial-water now and then. And I used for an Anodyne *Laudanum liquidum* (See its Description, Book 3. Tit. de Colica Biliosa) that is, 14 or 15 drops in any Cordial-water, for one Dose. This recommended method has easily the preeminence over all, that are yet known to me, in conquering this Disease, which very seldom continues beyond the third Purge.

But if the Disease were so stubborn, as not to give way to these things, then I used to give my Patient a Paregorick every day in the morning and at the hour of Sleep, till he was perfectly well; nor did I find the least inconvenience from so frequent a repetition of a narcotick Medicine as far as I could ever yet observe (how great harm soever some unexperienced persons may threaten will follow from thence) although I have known several, who in a stubborn Disease have taken it every day for some weeks together.

Dysenteries in general were to be treated after this manner. But it was observable, that what came the first year, were of a more subtle and spirituous nature, than what infested men the following years; and therefore they did not so readily yield to purging Medicines, as to them that diluted and tempered the blood and those sharp humours which are separated from it into the Guts. Wherefore the first Autumn that the dry Gripes and Dysentery invaded us, I constantly used the method following to drive away either Disease, the issue every way answering, till, upon the approach of Cold, I found it less efficacious the same year, and so the years following, when the Disease had departed farther from its subtilty, I found it wholly useless.

And I proceeded thus; If a Patient in the flower of his age had a Fever, I ordered him to bleed in the Arm, and within an hour or two to be well washed by throwing in a great quantity of Liqueur

(See Book 3. Tit. de Cholera) as was done in a Vomiting and Loosness, but not as there, with Chicken-broth or Posset-drink; but Whey to be drunk cold in the like quantity; and I ordered a Clyster of it warm, without Sugar or any thing else. I ever observed, that the Gripes and bloody stools after the return of the fourth Clyster did vanish. When this trouble was over, and all the Whey was passed, which will be in three or four hours space, if the Patient doe his duty diligently; I forthwith committed him to his Bed, where, in a short time, of his own accord, he was dissolved into a Sweat (from the Whey mixt with his Blood) which I ordered to be continued twenty four hours: allowing him nothing in the mean time, but raw Milk, a little warmed, which also he was to use, and nothing else, for three or four days after he rose from his Bed. If either he left his Bed or the use of his Milk too soon, he was to go through the same course over again.

XL. Because the Advice of a Physician, that would cure, must not onely be directed to the present state of the Patient, but also to the future, we must know, that although a thin Diet and Fasting be good for dysenterick persons, in the first days; yet, because in process of time the strength may be wasted with pain, watching, and often going to stool, it is good afterwards to feed the Patient somewhat higher. To this purpose things distilled off Flesh roasted, with Simples, or Gelly-broths, may seasonably be given.

XLI. Let the Meat be simple, and easie of Digestion; wherein the Vulgar often offend, who give to dysenterick Persons the hardest Meat and difficult of concoction, if they think there is any binding quality in it; and so they increase Crudities and the Disease.

XLII. As to Drink, the best way is to drink sparingly. *Paulus* and *Aetius* give rain water, wherein astringent fruits have been boiled, especially *Sumach*, *Sorrel* and *Plantain*, but it is onely proper for them that are used to it. In our Countries pure Beer is proper. *Amatus Lusitanus*, cent. 2. obs. 46. tells of a cholerick young Man, who in the heat of Summer began to be afflicted with a Dysentery and cholerick stools, and when he was destitute of any Physician's advice, he drank store of cold water, and was thereby recovered. Which nevertheless we may not imitate, unless in hot Countries, a hot Season, and where Choler abounds. When Strength fails, let some astringent red Wine be given, diluted, if convenient, with spring water, wherein heated Steel or Gold has been quenched, or wherein Plantain has been boiled or infused. And because the concoctive faculty does here fail, the use of Wine is often beneficial and necessary; and, I have observed, it agreed well with several in this epidemick Dysentery.

Medicines especially made use of by eminent Physicians.

1. Give the Dock, finely powdered, to the quantity of a spoonfull, with a rear Egg; and you will admire. ¶ Sup liquid Alume, with an Egg, and then drink some dissolved in warm water; and you will wonder.

2. The diaphoretick Flowers of Antimony are highly commended. ¶ *Saccharum*, or *dulcedo Aluminis*, is a most certain Remedy in the Bloody-flux. The Dose is 6 or 7 grains in Marmelade of Quinces.

3. The Leaves of Silver-weed applied to the Soles of the Feet are reckoned a Secret to cure any Bloody-flux in twenty four hours. ¶ One was cured to a miracle, and that quickly, onely by using for his ordinary Drink, water wherein Cork was boiled.

4. I ever found this Plaster most effectual in a Bloody-flux, applied to the Belly and Reins; Take of Tormentil root, Crum of a white Loaf, each what is sufficient; Boil it in Wine or Vinegar till it be Pap. Spread this on a Cotton cloth, and apply it to the region of the Belly before and behind.

Balth. Brun-
nerus.

5. I have always found this doe good as an Anodyne, that is, by anointing with Oil of St. John's-wort, and applying Nettles bruised between stones and heated, to the Belly.

6. In the end of a Dysentery, Juice of Worm-wood and Mint well purified, and made into a Syrup, is very good. ¶ *Emplastrum Diaphenicon frigidum* applied hot to the whole Belly, is most excellent in any Dysentery; the same also may be applied in the beginning.

7. Take pure root of Tormentil grossly bruised 6 ounces; Pour to it in a glass Body of Tormentil water 16 ounces; Let it simmer on a gentle Fire, then let it cool, and pour off and separate the Decoction carefully from the Root; add of fine Sugar half a pound. Set it in Sand, and with a gentle Fire reduce it to the consistency of a Syrup. Then add of the Tincture, Oil, or Liqueur (first precipitated with distilled Vinegar, and then with Spirit of Vitriol) of Corals: mix it well, and keep it. It is a most excellent Remedy in the Bloody-flux.

Mich. Crug-
nerus.

8. Oil of Walnuts cures a Flux miraculously, if it be taken inwardly, and the Belly be anointed therewith. ¶ This is reckoned a Secret in stopping Fluxes of the Belly; If you take of the Juice of unripe Grapes 10 spoonfuls, boil it a little; after it is clarified, drink a third part of it; for it presently stops the Flux and strengthens the Bowels.

Claud. Deo-
datus.

9. They say Cudweed boiled in Wine is an effectual Remedy.

Dioscorides.

10. Boil a Crab with Wine and Pepper; take off the Shells and dry them: the Powder of the simple Shell taken twice every day cures any Flux specifically. It may also be mixt with other things. It is an experienced thing. ¶ Distilled water of Celandine drunk, powerfully stops any Flux, as I have heard one say upon his certain experience.

Tob. Dorn-
cellius.

11. There is no more present Remedy than *Uva quercina* in Powder, for any Bloody-flux. I have cured some of desperate Dysenteries onely with it.

Christoph.
Engelius.

12. The Cawl of a Wether fried in Oil of Roses, and applied, is an excellent Remedy to stop the flux of it.

Franc. Osw.
Grembs.

13. A linen cloth dipt in the blood of a Hare not killed by a weapon, but in hunting by the bite of a Dog, and dried and kept for use; if it be made Lint of, and given in Wine, it cures the Dysentery. Yea, the Soldiers in Germany, when they have killed a Hare in the aforesaid manner, dry her in the smoke, and give her in drink; and so cure the Bloody-flux infallibly.

Van Hel-
mont.

14. The Liver of a Wolf prepared (that is, when it has been steeped 3 days in very strong Vinegar, and then dried in an Oven upon a Tile) is highly commended.

15. The Pisse of a Cat is a most certain Remedy in this Disease; the Shavings of it may be mixt in some Electuary.

Frid. Hof-
mannus.

16. It is admirable, that *Colcothar* (the *Caput mortuum* of Vitriol) should possess a quality to cure a Bloody-flux, that is, if they that are afflicted with the Bloody-flux do go to stool upon it, it cures them. This is confirmed by many observations of D. Michael.

Christ. Lan-
gius.

17. Half a drachm of Crystal finely powdered, and prepared, taken in some convenient Water, is a singular Remedy for a Dysentery, especially for one arising from porraceous and yellow choler.

Job. Langi-
us.

18. I have observed it by experience and beyond all doubt, that 2 drachms of *Filipendula* root given either in Wine or the Yolk of an Egg is good. The leaves and roots of which Herb I have often found to doe both the same thing. ¶ I have found this Poti-
on doe a great deal of good; Take of Syrup of Popy

1 ounce, of dried Roses half an ounce, *Diamargariton frigidum* half a drachm, burnt Ivory half a scruple, Water of Plantain, Horfe-tail, each 2 ounces.

¶ This is excellent good to ease pain; Take of *Acacia Hypocistis*, the inside of a Quince, Sumach, Galls, each 1 drachm; red Coral burnt and washt with Rose-water 1 drachm and an half, *Opium* 1 drachm, Cinnamon, *Cyperus*, each 1 drachm; Syrup of Roses what is sufficient. Make a solid Electuary; of which make Pills; whereof you may give a scruple or half a drachm.

Lud. Mercat-
tus.

19. An Egg boiled in Vinegar, and eaten, stops all Fluxes of the Belly.

Oribasius.

20. The Feet of a Partridge roasted, and one drachm of the Powder given in Coriander water, when there is a Fever; and when there is none, in black Wine; cures even a raging Dysentery.

Joh. Prævo-
tius.

21. The dung of a Dog that eats bones, dried and powdered, and put in a little chalybeate Milk, is good for a Dysentery, given for 3 days morning and evening. I can safely swear I have cured above an hundred of the Dysentery with it in one year, as *Christopher Landrinus* can testify.

Joh. David
Rolandus.

22. The Fruit of the Linden-tree yields an effectual Remedy for any Flux of the Belly, as *Camerarius* testifies.

Valesc. de
Taraora.

23. The lesser Plantain given with an equal quantity of *Daucus* is a singular Remedy.

Gul. Varig-
nana.

24. This is very much commended; If the Patient for 3 or 4 days morning and evening sit over a red hot Plate of metal, upon which 1 ounce of the best Turpentine or Pine Resin must be thrown.

¶ This is an admirable one, especially in Childrens fluxes, if every day morning and evening the Child's anus be fumed with the Powder of young Asses dung, carefully dried in an oven, and strewed upon red hot Coals. ¶ The following Fomentation also is highly commended; Take of Balm 1 pound, Mullen 1 handfull; put them in a long bag, which afterwards boiled in a like quantity of styptick red Wine and strong Vinegar, to a third, must be applied warm to the Seat.

Benedict.
Victor.

25. Many reckon Cresses seed given alone or mixt with other things a singular Remedy in the Bloody-flux.

Arn. Wei-
kardus.

26. This is a singular Remedy for any Flux of Blood; Take Frog-spawn, and dip a linen cloth at least thrice in it, dry it in the shade, and doe so thrice. Which cloth so prepared and dried you may use. Apply a piece twice as large as the place where-out the Blood flows. Keep this as a Secret. ¶ This is a singular Remedy for the Bloody-flux; Break a new Egg into a new earthen Pot, then take a like quantity of Honey, Vinegar and Oil; mix them all together and bake them. Eat them, and you will find a good effect.

Marc. Ant.
Zimara.

Dysuria, or, Sharpness of Urine.

The Contents.

It must be cured variously, according to the diversity of the cause. I.

A Point is proper. II.

The benefit of Clysters. III.

Cassia sometimes suspected. IV.

Diureticks sometimes hurtfull. V.

It arises sometimes from the defect of the humour that moistens the urinary passage. VI.

Sometimes from the site of the Bladder altered. VII.

Sometime from the glandulous Body too much dried. VIII.

Medicines.

I. A Man threescore years of age was sick of a violent Sharpness of Urine; some placed the cause in his Bladder, others in his Kidneys: But when he was dead of an Apoplexy, there was

was no fault observed in his Reins or Bladder, one-ly the Liver was somewhat hard. So that it plainly appeared, the fault came from the too great Sharpness of the Humours that run to the Bladder; for his Urine was tinged and clear enough. One at last died of this Disease; there was a Stone found in his Bladder that weighed 2 ounces and an half, with a great Putrefaction of his Kidneys, he was exceeding venereal.

J. Hestus
and Schen-
kium.

¶ In curing old men, who are sick of Sharpness of Urine or Strangury, we must see that the fuliginous and serous excrements perspire. We must see also whether any Catarrh fall from the Brain by the Spine upon the Bladder; for it must be diverted. I saw one who when he had been sick of a Dysuria, after he had voided a whitish humour by Urine, was rid of his Dysuria. He was in his declining age; how much more then may a Dysuria be caused in old Men by this humour?

Hollerius,
apb. 31. 3.

Baehnius.

¶ One is sick of a Dysuria, a purulent matter runs the whole day from him; undoubtedly it must come from his Parastate. ¶ Sometimes a white and milky matter is voided in such plenty, that when it is settled, it takes up half the room in the Chamber-pot. The Cause is both the weakness of the Stomach, that makes ill Chyle; and a weakness in the Kidneys, to which when some lacteal Veins come, that receive immediately the watry Chyle, then when the Kidneys are weak, the thin Chyle not well cleared of the salt tartarous dregs, being carried thither, it passes, together with the Urine, into the Bladder; it is a Disease familiar to Women and cold complexions. *Pulv. Stomach. Quercetani* is good, with the inner Coat of a Hen's Gizzard in Hippocras-wine; and outwardly to anoint with *Unguentum Stomach.*

H. Sinannus.

II. Both Learned men have written, and Experience it self hath often taught me, that a Vomit is a most excellent Remedy in the heat of Urine. For a Vomit draws powerfully, and evacuates the cholerick humours from the Liver and mesaraick Veins: And we must begin with gentle ones.

Fabr. Hildanus.

III. Clysters of pure Milk, or mixt with Mucilages, use to be so efficacious, that I have known some Patients, who after long Pains have found ease onely by this Remedy and a Bath.

Riverius.

IV. It is necessary that the Body be evacuated at certain intervals. This may be done by lenient and gently purging Medicines: for by strong ones the humours are inflamed, and the heat of Urine increased. *Cassa* in this case is preferred by most Authors: but I have observed, that after the use of *Cassa*, the pains have been increased in several Patients.

Hildanus.

V. Young Physicians must be admonished, that in Sharpness of Urine they make not a negligent inspection into the Causes of this Disease. For there are many deceived, who think it arises from the Stone in the Bladder, wherefore they give their miserable Patients Medicines accommodated to break the Stone, which is turned to their Urine: for the heat of Urine is increased by those Medicines that are endued with a hot faculty: whereupon an Ulcer in the Kidneys or the Bladder must needs be bred, and therefore they must be continually upon the rack, who fall into the wicked hands of such Hang-men. As in my time it happened to one, who, neglecting necessary means at first, and afterwards taking all the Medicines of Empiricks, fell into a mortal Diabetes.

P. Schallius.

VI. A certain oleaginous matter, that drops down insensibly moistens the *Urethra* in a Man, and the passage of the Womb in a Woman. In defect of this, the Urine being sharp hurts the *Urethra*, and cannot pass freely out. Several have been cured by moistning Diet, a Bath, and Oil of Sweet-almonds injected by a Syringe into the *Urethra*.

Riolanus.

VII. The site of the Bladder is sometimes changed, when that portion of the *Peritoneum* wherein it is enclosed, is loosened, and a little turned down, which causes a difficulty in pissing, except the Belly be lift up by the Hand.

Idem.

VIII. One made water with difficulty, those Glands being dried up, which are called *Parastate variciformes*, nor did he discharge his Bladder without a great weight of Urine: So I ordered those Parts, and the whole Body to be restored by Unctions, and the passage of the Urine being open, he was cured.

Al. Benedictus.

Medicines especially made use of by eminent Physicians.

1. Nothing is better in Heat of Urine than Steam of Milk, wherein Mullein has been boiled. ¶ An admirable Syrup for Heat of Urine; Take of Seed of Marsh-mallow, Mallow, Quince, Fleawort, each 1 ounce; put them in a hot Decoction of the Root of Marsh-mallow, Seeds of white Popy, winter Cherries, what is sufficient. When the Mucilage is made, strain it, and with Sugar make it into a Sy-Deodatus rup.

2. The following Elestuary wonderfully corrects the hot Intemperature of the Brain, and Sharpness of Urine; Take of Conserve of Flowers of Water-lily, Violets, Roses, Flowers of Cichory, each one drachm; white and red Saunders, each 1 scruple; Seeds of Sorrel and Purslain, each 2 scruples; Trochises of Camphire, 1 drachm and a half. Mix them with Syrup of Popy. Make an Elestuary. The Dose is 2 drachms morning and evening.

3. *Johannes Baptista Theodosius* commends the following Medicine out of *Galen* and *Avicen*, as one that never failed him; Take of Mallow-leaves 1 handfull and an half, fresh Butter 2 drachms, Honey half a pound: Let them boil in 5 pounds of Water to a third: Of which you may drink a little.

Joh. Fontanus.

4. One applied this Cataplasim to his twist, and he presently made water freely; Take of Pellitory of the Wall 2 handfulls, Chervil 1 handfull and an half, cut them and boil them soft, add of Butter 2 drachms, Oil of Scorpions 1 drachm and an half. Mix them and apply them hot. It did so much good, *Forestus*, there was no need of any other Remedies.

5. I will not conceal this Powder wherein I put great confidence; Take of Winter Cherries, No. xij. Seeds of Cucumber, white Popy, each half an ounce; white Sugar what is sufficient. Make a Powder: of which take half an ounce always before meal.

6. Take of Salt Nitre prepared, Sugar-candy, each half a drachm; give it in Parsley-water; it is experienced.

Job. Prætorius.

7. An Emulsion of Chestnuts and a little white Popy seeds made with Liquorish water, is good for Heat of urine.

Wittichius.

A GUIDE TO The Practical Physician.

BOOK V.

Of Diseases beginning with the Letter E.

Ebrietas, or Drunkenness.

The Contents.

*Whether it be discussed by drinking Wine afresh? I.
Discussed by applying a Medicine to the Stones. II.
When a Bath is proper for the cure of a Surfeit? III.
Medicines.*

I. According to the rule of *Schola Salernitana*,

A

*Si nocturna tibi nocet potatio vini,
Hoc mane rebibas, & erit tibi medici-
na. i. e.*

If you be bitten by a dog over night, a hair of his tail will cure you the next morning. And although this remedy may seem to contradict the common fundamental of Medical Cure, that Contraries must be the cure of Contraries; and that of *Hippocrates* 1 Aphor. 3. That fulness is cured by emptiness: Yet we must distinguish between things that are done by accident, and things that come of themselves. Repletion is not truly the remedy of repletion; but it does good, inasmuch as it excites the faculty and the innate heat; hence a consumption of the morbid matter happens from it: For Nature, upon the accession of new Aliment attempts concoction, which before it was not able to perform. Crude matter indeed over-heaped does harm, if the quantity exceed the strength of the stomach, but a little puts Nature in mind of her duty, and solicites her to perfect concoction. *Hollerius de morb. int. lib. 1. cap. 3.* affirms, that the hurt of Wine is removed by repeated drinking, inasmuch as Wine by its heating and drying power consumes the hurt of Wine; In the same manner as *Hippocrates* says, that pains in the

eyes, arising from thick vapours, are cured by drinking mere Wine. *A. Villanovanus*, in his Comment upon the aforesaid Verses, adds a caution, namely, that the rule holds not good when Drunkenness has heated the body: because then the repeated drinking of Wine, would be onely adding fuel to the fire.

II. One that had drank plentifully of Spanish Wine, fell from his seat and lay for dead; when his Scrotum, and all his Privities were wrapped up in the Juice of Hottleek, mixt with sharp Vinegar and Nitre, his drunkenness was presently discussed; yet a heaviness remained in his head.

III. *Galen*, for the concoction of crudity, orders them that are drunk to bathe the next day, and after bathing to go to sleep. Yet he advises not this in every head-ach, but when the head is hot without a Fever, then he prescribes a Bath, and after bathing to eat Lettuce, and sup Ptisan: But when flatulent vapours exhale to the head from putrid humours in the stomach, and cause giddiness, then he utterly disswades the use of the Bath.

Medicines especially made use of by eminent Physicians.

1. Leaves of large-headed Lettuce steeped in cold water, and applied to the head; are good for the Head-ach. *Jacob. Fen-
tanus.*

2. It is a most excellent thing to prevent drunkenness, to take 2 ounces of Oil. *Nic. Piso.*

3. One writes, that if you take the powder of burnt Swallows, it will never suffer you to be drunk. ¶ Also a Powder that hinders drunkenness is thus prepared; Take of Seeds of Colewort 1 drachm, Coriander half a drachm, Camphire 2 grains. The dose is a spoonfull in austere Wine. ¶ Also Vinegar taken either dashed with water, or by it self in a good quantity, is an Antidote

Felix Plate-
rus.

tidote against drunkenness; wherewith a notorious drunkard has used for a long time to arm himself against all harm from hard drinking.

4. If you take 2 ounces of common Oil of Roses, you will be free from drunkenness that whole day. ¶ This Powder is accounted a great secret; Take of the powder of Red-Roses half a scruple, burnt-Swallows 2 scruples, Seeds of Cabbage, Purslain, each half a scruple, Mastick 4 grains, Sugar of Roses 2 scruples, for one time.

Ecchymoma, or a Bruise, or Blackness and Blewness.

The Contents.

Fat things must not be applied. I.

We must use Suppuraters cautiously. II.

We must not tarry for perfect Suppuration. III.

A spontaneous one how cured? IV.

If the Skin be broken, it must be guarded, before a Cataplasin be applied. V.

A great one in the head cured by the use of dispersers. VI.

How cured in the sides, belly and back? VII.

How to be handled about the ribs? VIII.

The cure of one in the left Groin. IX.

Its cure by cutting. X.

One by a Fall how cured? XI.

They that are not timely taken out, end in sinuous Ulcers, and must be cured by cutting. XII.

Medicines.

I. **B** Ath-keepers apply to the contusion of the parts a midding Medicine, between a Plaster and a Cataplasin, made of astringents, dispersers, driers, and strengtheners of the tendons and nerves, as Bean-flower, dust of the Mill, Bole-Arménick, Comfrey, mixt with the White of an Egg. *Horstius* says, It is no absurdity, if we apply such things as soon as the part is bruised, though it want articulation, while the matter is yet upon motion thither: For then the affluent matter is wasted more powerfully by drying, and hindered by repelling. But if we use Unguents or Oils, the Skin and Pores are stoppt, so that what ought to exhale, cannot. Otherwise, if the Contusion be small, nothing is better in the beginning for moderate repelling and discussing, than a linen-cloth dipt in Rose-water and Whites of Eggs beaten, applied warm: Or if the Skin onely be bruised, it may be anointed immediately with Hog's-grease; It will be quickly cured without any spot.

II. If we can by no means obtain discussion, and there be marks of Suppuration, it must be promoted: Yet we must use caution in the application of Suppuraters, and we must not use any but such as are moderate: for if we mistake but a little in this case, a sordid Ulcer and Putrefaction may easily be raised in the part.

III. And because Modern Chirurgeons have observed this, they advise, when we observe a Contusion run into an Impothume, that we should not wait for perfect Suppuration: For if Pus, which is bred of concrete blood, be kept long in the part affected, it may cause much mischief, as Fevers, Pains and high Putrefaction, and corrupt the adjoining parts, Nerves and Bones; whence afterwards malignant Ulcers, and oftentimes *Fistulae*, derive their original. Nor also do they admit of emollient and suppurating Plasters and Cataplasins, because Putrefaction may easily be caused by them.

IV. A Man of Threescore, of a full constitution, complained of distensions from his head; the night following he observes a sudden remission of his Head-ach. His left arm was all on a sudden of a

deep blood red colour, without any pain or inflammation, and so was the upper part of the same side. When I was called, I judged it to be an *Ecchymosis*, from an internal cause, Nature driving the abundance of blood, which threatned an Apoplexy from fulness, to the out parts: and I declared that this afflux must be dissipated by things that digest gradually, and not at all by repellents: By which means the red colour became a little blew, and then yellow; just as we see *Ecchymoses* left after blood-letting are also dissipated by Nature. For this reason I ordered Ry-flower, mixt with powder of Chamæmil flowers, Savine and Melilot, &c. to be applied twice a day: Making use in the mean time of such things as plenitude requires. ¶ A boy six months old had several fits, at length when his Fits were returning, he was on a sudden taken with such another *Ecchymosis* about his left Eyelid and Cheek, whereby he was relieved, and seemed better in other respects. Here I told them they must abstain from liquid things, as being endued with a repelling faculty, by reason of their actual coldness, which they quickly fall into; and that they should undertake the business with dry digesting fomentations, by which also gradually a dissipation was obtained, as in the former.

V. This Caution is necessary before application of a Cataplasin, that, if the Skin be not whole, a thin linen rag, spread with *Unguentum rosatum*, *populeum*, or *de tutia*, be first applied, and then the Cataplasin.

VI. A Woman about 50 years old got a contused wound in her head by a fall, so that there arose a Tumour from the extravasated blood, as big as a Hen's Egg. When all was done that should be done, I thought of opening it, or suppurating it according to *Aphor. 5. 20*. To this there did concur, the abundance of matter, her age, the hardness of her Skin, the Winter-season. Because she was against opening it, and that I might avoid the pain and other troubles of Suppuration, I tried dissipation. First I fomented the part with warm water for half an hour, then I shaved the part against the hair, that the pores might be better opened, and the filth sticking to the part might be better got off: Then I applied of Oil of Lilies and Chamæmil equal parts, applying upon that warm Cotton fumed with Spices, and so the Tumour dissolved beyond all expectation.

VII. They think this must especially be observed, if the contusion be in the sides, belly or back. For then we must take especial notice, whether in 3, 4, or 5 days, there arise upon the place, where the Contusion was, a Swelling with pain, whether it increase daily, and there be a throbbing pain, and the Patient cannot indure the part to be touched, if an unusual redness appear round it, if he breathe short, and there be any heat in the body: For when these things appear, although no blewness appear in the outer parts, it is a sign that matter is gathering, and an Impothume breeding. Wherefore, lest the matter turn inwards, eat holes, and corrode the inward parts, and by these means cause death, or tedious diseases in the Patient, the place must be timely opened; for when the place is opened, the matter runs out with ease. They think that Emollients and Suppuraters doe little good.

VIII. We must take notice also of what *Paracelsus* tells us, how in a Contusion of the Muscles, especially about the ribs, the flesh swells, and becomes as it were mucous; so that if it be prest, it makes the air flatulent, with a small hissing, and the prints of one's fingers remain in it. Then in the space, which the flesh parting from the bones has left, a purulent matter is left, which causes the ribs to perish. If this happen, we must timely prevent the mischief, and the part must be bound very strait, and then *Oxyroceum Diachylum*, *striatum*, or the like digesters must be used.

IX. Some

H. F. rus.
Here Med.
4. 50. c. 1.

Sennertus.

Gr. Horstius, l. 9. obs. 11.

Hearnus, l. 1. Meth. ad Prax.

Riverius in obs. committit.

Sennertus.

IX. Some Noblemen in the River threw Water one at another; one of them that had stirred himself most violently, had a great pain in his left groin, and at length an *Ecchymosis* in the same place, a span long, and five inches broad, which was a certain argument that some Vessels must be broken. Therefore the cure of broken Vessels was entred upon by *Unguentum herbaceum* inwardly and outwardly, *Pulvis ad casum*, *Pimpinellæ* and *Oxyroctum*, presently the pain ceased, and the concrete blood exhaled.

X. You may often see, upon a Contusion of the fleshy parts of the body, abundance of blood extravasated in their interstices, which you may find to fluctuate by the touch of your fingers, and you may sever it, as in abscesses; but you must consider, that to treat this as an Abscess is not always successful. To go to work by Discutients were tedious, and by driers would be more difficult; but to efficacious and expeditious Chirurgery it is easie. That is, if you thrust a Penknife, or sometimes a broad-pointed Lancet into the Skin: for so, and by squeezing it a little, the grumous blood will start out wonderfully. Which was verified in a Carman, that was kicked by a Mule, and had his Arm bruised, swelled and pained, who came to me, and was this way successfully cured.

XI. A Man of about 36 years of Age, of a lean constitution, by accident of a fall, near two stories high, into the Street, was sorely bruised, especially on his left-side, hip and arm. I immediately let him blood largely, and embrocated the parts bruised, *cum oleo ros. myrt. & aceto*, and applied astringent Emplasters. A Clyster was also prescribed, and Irish Slate, &c. was given him, whereby he was disposed to a breathing sweat: and at the hour of sleep an Anodyne draught was prescribed, to incline him to rest. By this method the fluxion was checked, during which the parts diseased were fomented with a decoct. *summitat. absinth. anethi. majoranæ. flor. cham. sambuci. sem. anisi & cumini*, to which was added *Spir. vini*. Embrocations were also made *ex oleis aneth. rutæ & terebinth.* and the Cerote above proposed was applied over them: and in progress of time he was cured.

XII. To them that are employed in the cure of outward Ails, there often occur Ulcers, which lie hid under the Skin, a little discoloured, and something exasperated, unity being broke; which in cacoehymick or cachectick bodies gives a painfull suspicion of it self, and which may either pass into some cavity, if any such place be there, or of besetting and putrefying the bones; or the Muscles and Nerves, or if these or any joint be underneath, there is fear of loss or lameness, or of a perpetual feebleness. Which it is a prudent Man's part to prevent; because the force of corruption is admirable, if it remain there any time. For I have seen, where the Skin has been whole, and where it has not been touched by the abscess, pieces of flesh, ill cured, have withered, and likewise whole torous Muscles, and long tendons, &c. Yea, and solid bones have lost their rigour, and natural splendour. I have had eminent examples of this matter. Which, indeed, as it is wonderfull in exactly putrid Ails, so it is much more admirable in Contusions and *Ecchymomas*, which if indeed they fall upon the nervous parts, and be not at the first exhausted and dried up by Medicines, when the flesh, and vessels, and fibres of other parts, do both languish with the bruise, and are a little poisoned with their own juice extravasated, the bones which are fenced round, being not sufficiently defended by their own small heat and slender vigour, and being deprived by degrees of their temperament, wax black, which is the last sign of absolute mortification. This was the case of N. whose hand was bruised with a stick, and when the *Ecchymoma* had been ill cured by others, and was just turning to an Abscess, I opened it, and found it putrefied a great way; and after the ri-

sing of a great Swelling, it created me no small trouble in the cure, till the *ossa phalangis* were laid bare, and appeared black. And he was cured of the Abscess of the Bones with much adoe.

Severinus,
Med. Eff. p.
107.

Medicines especially made use of by eminent Physicians.

1. This is very effectual. Take of Flower of Fænugreek 1 ounce, of Frankincense, Myrrhe, or Lucca, each 1 drachm, Goat's-dung half an ounce, Salt 2 drachms. Boil them in Wine. Make a Plaster.

Platerius.

2. For this purpose some, which is an excellent remedy for them, especially that are beaten; do wrap the Patient in a Sheep-skin newly slain, while it is hot, bestrewed with Salt, Powder of Myrtle-berries, Garden-creffes; or if a Sheep-skin be wanting, let the Patient be anointed with Oil of Roses, Myrtle, Worms, to which may be added Powder of Red-Roses, or Myrtle-berries. ¶ And the Root of Solomon's-Seal is most efficacious in curing bruises, which either fresh, or in Winter-time, steeped in Wine, and bruised, and applied in form of a Cataplasin, often in one night, takes away the Sugillation, so that the natural colour returns to the part affected. ¶ Also a rank Nut bruised is commended. And if the extravasated blood cannot be discutied by other remedies, cupping-glasses, if the place will bear them, must be applied, which are a most effectual remedy to draw out whatever is contained deep in, and if there be occasion, Scarifications must be used, that some of the blood may manifestly be discharged.

Sennertus.

Empyema, or a gathering of corrupted Matter in the Chest.

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Medicines.

I. What can be expected from giving a Purge, when the peccant matter can onely be discharged by spitting? But, Hippocrates, lib. de int. affect. Purges by Mare's-milk, and sometimes by Asse's. And Trallianus beside these, in some cases, allows of Goat's and Cow's Milk; and justly indeed, because from Milk we have the cleansing of the

Phil. Sal.
muth. cent.
1. obs. 68.

Severinus,
Eff. Chir. p.
97.

Wiceman's
Chirurgery.
70.

Body, and the cooling and tempering of the Humours, all which things are desired in suppurated persons; for the cleaner Bodies are, the less sick they are, tempered humours doe less harm, and when the habit is cooled, Fevers are less afflicive. Wherefore, I commend such a kind of Purge; but for this a great quantity of Milk, that is, three or four pounds must be given: And what *Hippocrates* did every day, that we must doe at several turns. But if the use of Milk do not please, or the Patient refuse it, for this same Purging we must make use of *Manna*, *Cassia*, Solutive Syrup of Violets; and the like, which are proper to evacuate, cool and temper.

Pet. Sallius
Divertus,
com. in text.
7. l. 1. de
morb.

II. Urinary Medicines are usually powerfull remedies; for that Catarrh, which falls down on the Lungs, and there putrefies, does not take its rise from the head onely; but sometimes it is cast off by the whole venous kind, upon some weak part. Therefore Sweat and Urine is a present remedy for it: And a decoction of *China-root* with Scabious, and other things proper for the Breast and Urine, will doe good.

Heurnius.

III. If the Abscess break not, Practitioners bid us give such things as may break it. But they do not reach to the part affected. It were better to apply Medicines to the side, which might draw outwards, and afterwards open it with an Instrument, or Caustery, that the matter may purge outward, and not break inward: for breaking inward would be dangerous for fear of choaking; and when it was broke, the matter could not conveniently be evacuated. And when the Lungs are exulcerated, Men become consumptive and die.

Rondeletius,
l. 2. c. 15.

IV. In the choice of Medicines we must have respect to the matter which must be expectorated. For if the Pus be bilious, sharp and corroding, we must chuse such as mitigate and allay acrimony; as Barley, Jujubes, Raisins, and the like; If the Pus be not sharp, but thick, then attenuating and inciding Medicines must be made use of, as Hyssop, Coltsfoot, Elecampane-root, &c.

Sennertus.

V. The insensible drying and consumption of the purulent matter is usually attempted by drying and resolving Decoctions; from which, seeing more hurt may be feared, through increase of the leanness and Fever, than good, by consuming a small portion of the matter; therefore we deservedly omit this sort of remedy in this case.

VI. Instead whereof I should more willingly give Sulphureous Waters, both Purgative and Diuretick, if they were at hand, for several days, to dry up the Lungs, and carry off the matter both ways. But in defect of them use may be made of a decoction of the Root of Elecampane, Liquorice, and *China* also, if you can have good, made in distilled Water of Coltsfoot, Lungwort and Maiden-hair, about half a scruple of Spirit of Tartar, and Spirit of Turpentine being added for one time; where to may be premised a Bolus made of Salt of Urine, Butter of Sulphur and Turpentine.

Foris, com.
sult. 41. cent.
2.

VII. External Expectorators must not be neglected, and the Muscles of the Breast must be freed from tension and hardness by anointings and fomentations; Yet we must not insist long upon them, lest the strength of the Muscles, which is here very necessary, be spent; and by reason of laxity the chest be again made liable to fluxions.

Rondeletius.

VIII. Tapping is more dangerous, than is commonly believed, for seeing the Lungs always play on the inner superficies of the Breast, and in expiration is but a very little way from it, they can scarce avoid the edge of the Knife: And then the matter cannot well get out. At last, if the matter get out, to me it is probable, that it proceeds from the very Lungs, after their Coat is wounded; which is the reason, why the Physician rarely obtains his desired end, and the Patient, for the most part, dies quickly after.

J. Van Horne
Microtech. p.
2. Sect. 18.

IX. Unless the strength of the Patient be very good, or indifferent, tapping must be omitted, lest when the Patient dies, a remedy, otherwise the most noble and safe, be defamed. And Physicians measure for the most part the strength by Pulses, which yet may deceive the Physicians in this case, since the matter in the Breast of a Patient, that is yet strong enough, may cause Pulses, that argue lowness of strength, namely, a little, swift, frequent and inordinate one. But it is a most certain sign, the strength is good, when a Patient can sit or walk, and that either by the benefit of a strong nature, or by the help of some Staff.

Scultetus
Tab. 35.

X. The matter of an Empyema must be let out by little and little, and at several times, that is, every day six ounces once or twice, as the strength of the Patient can bear it: for if they who let out all the matter together at one time, do not die spent, yet because of the sudden change of nature, they must certainly expect a greater Empyema than the former; for Nature, if the matter she was accustomed to, be evacuated all at once, transmits many humours from the rest of the Body, to correct the Vacuum that was so suddenly made, so that a greater and worse Empyema than the former must arise.

Idem, ibid.

XI. This must in the first place be considered, whether the signs that the Disease is made be certain or dubious: In the former case there is no great need of Pharmacy, but onely of a prepared body, and you may straight proceed to the opening of the side. Therefore, if after a Pleurisie, or Peripneumony, or blood run inwards after a wound, there be any fluctuation of Pus, or purulent matter, or blood within the cavity of the Thorax perceived, with no spitting, or diminished, there is no necessity for our tarrying any longer upon ripening, or expectorating Medicines; but we must proceed to tapping: In tender and timorous people a caustick may be first applied between the sixth and seventh rib. But if the signs of this disease be not so very certain, and altogether dubious, we must not fall too soon and rashly upon tapping: For in some that spit out purulent matter, with great difficulty of breathing, and straitness of Breast, I have known Tapping celebrated, not onely to no purpose, but to hurt. Therefore when expectorators, and gentle diureticks and sudorificks have been used in vain, we may proceed to Tapping.

Willis.

XII. *Hippocrates* used burning to all that were suppurated, when they had gathered Pus in the Thorax, or in the region of the belly: and when burning is not sufficient, he proceeded to penetrating section. And truly I persuade my self, this cure would be very beneficial to many, were it but administered in time. But now it gives help to few or none, because either it is not done at all, or much later than it should be done; partly because Physicians themselves are afraid, as if it were some great matter; partly because Patients will not obey them, except they plainly see they must die, and then they give way when it is too late: But the seasonable use of such things, is, while the Patient has yet strength to bear them.

Vallesius, l. 5.
Epidem.

XIII. *Hippocrates*, 6. apbor. 27. commends Tapping; and *Galen* gives it his Vote, nor without reason; for wounds of the Breast are not mortal of themselves, and there is not a more convenient passage open for the purulent matter: So that the several attempts for evacuation of the matter, by Vesicatories; or, as *Paul* will have it, by several Burnings made in the skin, that the matter may be drawn to the external Muscles, are fruitless, because of loss of time, which is attended by loss of strength. The experience of both the ancient and modern make it clear, that several have been saved this way. *Marchetti*, in *sylloge observat.* 44. has an illustrious example. A Nobleman of Padua, saith he, after a Pleurisie that was not well purged, fell into an Empyema: So much Pus was contained in the cavity of the

the

the *Thorax*, that twice or thrice a-day he fell into a *Lipthymy*, next to a *Syncope*: I propounded cutting between the fifth and sixth Rib, commended by all Authours, and by my own experience often administered with good success, which the next morning I performed between the fifth and sixth Rib (some condemning it for fear of hurting the intercostal vessels) and put in a Tent thick enough, which might keep the hole open: I drew it out about evening, and with it above three pounds of Pus; after which N. was well of his *Lipthymy*: Which I afterwards cured, as other wounds of the Breast, that is, every day drawing out the purulent matter, and a few days after putting in a Leaden pipe, through which all the matter was wholly drawn out. Which at last, being drawn out, I brought the wound to a *Cicatrice*, at length, in the space of twenty eight days.

XIV. There is a great disagreement in opinions about the place of Cutting, some chusing the space between the fourth and fifth Rib, others that between the third and fourth: And the latter opinion evidently preponderates, as to getting out most conveniently what is troublesome to the diaphragm: But the case in a live and a dead man is far different; because in the living the diaphragm is lifted up much higher than in the dead: but in a suppuration of long continuance the expulsive faculty so languishes, or rather is so dead, that it delivers its burthen much more easily down-hill than up. A publick Hospital sometime saw this in an unfortunate man, from whom cutting above brought out no Pus, but cutting below, after he was dead, brought away much.

M. Tulpius,
l. 2. lib. 5.

Moreover it is necessary to find the distance of Latitude: For if Section be made towards the Back, the thickness of the Muscles of the Back, the multitude of Tendons, and the passage of the Nerves from the Spine shew danger: If you cut forward toward the Breast, it is to be feared you may hurt the diaphragm; or, if you miss that, you may not be able (because of the activity of the diaphragm) conveniently to purge out what will be apt to fall backwards. That you may shun these Rocks, take a thread, and measure from the tip of the Breast bone to the top of the *Vertebra's* of the Spine. Then divide this into three parts, and at that place whither the two third parts of the thread reach (beginning from the Breast-bone) there will be the very place for Tapping.

Jo. van Horne
Microtech.
p. 1. sect. 18.

¶ *Paulus*. l. 6. c. 44. opens the Breast between the fifth and sixth Rib, reckoning from above: But *Hippocrates*, l. 2. de morbis, opens between the seventh and eighth Rib, reckoning also from above. In the place cited indeed he names the Interstice of the third and fourth Rib for Tapping, reckoning from the last below upwards: Yet, because he reckons not the twelfth Rib, as being difficult to find, and begins his account from the eleventh exclusively, this place jumps with the Interstice, which is between the seventh and the eighth. This place of *Paulus* in some does usually make a right perpendicular line with the Nipple of the Breast. *Hippocrates* chuses the eminence or bending of the Ribs; yet, to avoid the nervous Muscles, he makes not his incision upon it, nor behind, towards the Back; but a little forward, toward the *Sternum*. Indeed in this place of *Hippocrates* the diaphragm seems to be in danger, but is in none, because, being depressed by the quantity of matter, where it sticks to the Ribs, it comes not so high as to be hurt by the Knife. In the same side, where matter is perceived gathered, the Tapping must be made. If therefore it be felt on the right side, tap on the right; if on the left, tap on the left; if on both sides, tap on both. Of the recounted places, that of *Hippocrates* is certainly the best, because Pus, or any other matter gathered in the Breast, may this way better run out, because of the more declivous site of the opening, than in that of *Paulus*. Yet that of *Paulus* is not wholly to be de-

spised, since, the matter a little more narrowly considered, in the right side *Paulus* his place seems preferable to that of *Hippocrates*, because the Liver, by its gibbous side, drives the diaphragm upwards. In the left side, if the Chest must be opened on that, because the diaphragm, by reason of the lower site of the Spleen, rises not so high, and is depressed by the store of matter, either *Hippocrates* his place must be made choice of (wherefore *Hippocrates*, l. 2. de morbis, says, It were to be wished, that the matter to be evacuated always settled on the left side) or the middle one between it and that of *Paulus*. ¶ Two things should be taken care of in the choice of the place; First, that nothing (which may any way endanger the Patient) may be hurt in the Chest, that is, the *Pericardium*, Lungs, Diaphragm, Veins, Arteries or Nerves. Secondly, that Pus may conveniently be evacuated by the place; where the section is made. ¶ I saw one, who going about to cut the Muscle of the *Thorax* between the fourth and fifth Ribs (though I had ever rather doe it, being taught by long experience, between the fifth and sixth, or rather below the membrane which clothes the sixth underneath) cut through the very *Pericardium*, whereupon he fell in a Swoond; and, when the Chirurgion came the next day, he found him dead. I saw another make a hole on the right side, so wide, that I could easily have put three of my fingers into it, whereby both the *Vena azyga* and other Veins were cut, so that the poor man expired under the Chirurgion's hand. There lives now at *Liege* a Tailor, who by my advice, when he was almost choaked with the quantity of matter, was cut by a skillfull Chirurgion between the fourth and fifth Ribs; and twenty days after he was cut, as he should, below the sixth, and he quickly recovered.

S. ulricus
Tab. 35.

Scapular

Heur. 28
Heur. lib. 225

XV. As to what concerns the place where this Section should be made, the Learned are at no small variance among themselves; and the reason of this thing may easily be imagined: for sometime the diaphragm lies higher in one Man than in another, so that this is the reason, why the humours, that fall upon the diaphragm, are found higher in one Man than in another. 2. Some have a protuberant Breast, others a flat one, which also causes a great alteration. Besides, the Lungs often stick so fast to the *Pleura*, that the Pus cannot easily fall down upon the diaphragm, wherefore you do not doe well, if you cut the lowest place about the diaphragm. And although both in this and other Tumours the highest place be reckoned the fittest for opening, it is not impossible, if the Disease put the Chirurgion upon it, to chuse sometimes one place, sometimes another for the most convenient. Upon this score *Hippocrates*, *Guido*, &c. open the Breast between the third and fourth Rib, reckoning from below; *Flenus*, *Riverius*, &c. between the fourth and fifth; *Vidius*, *Aquapendens*, &c. between the fifth and sixth; which place seems to them and to us the safest of all: for if you cut higher, you endanger the *Pericardium*; and if lower, you will hurt the Diaphragm, as very sad examples of this matter have made it evident to us. But in this troubled water of Discord among Writers, the Signs now proposed will conduct you safe to harbor.

XVI. In the inner part, on the under side, the Ribs are a little hollowed by a *Sinus*, where they receive an intercostal Nerve, Artery and Vein: This *Sinus* is especially considerable in tapping Empyick persons; for we must have a great care that we hurt not the said intercostal Vessels. *Bartholinus* writes, that this may be avoided, if Section be made from above downwards: For so *Otho Heurnius* did of old teach us, who for this Section required a Knife on one side sharp and cutting, on the other blunt, and he would have it so thrust in, that the blunt part should be towards the lower part of the upper Rib, that is, towards the aforesaid

Barbette
Chirurg.

mus, and the lower sharp part should be forced downwards to the top of the lower Rib. But practice and experience teach, that all this Doctrine is more theoretical than practical, for in a living Man the Ribs are not so far distant one from another, that a Knife can conveniently be thrust in athwart from the lower part of the upper Rib to the top of the nether. And therefore, that the said hurt of the Vessels may be avoided, I use to order the Chirurgion to make his Section in the upper part of the Rib, lengthways of it, and not going upwards toward the Rib next above it. Some say, that by this way the transverse Fibres of the intercostal Muscles are too much cut, as if they remained unhurt in the former Section. All the Fibres of these Muscles are oblique, and the inner lye cross the outer, so that whatever way Section be made, the hurting of the Fibres can no way be avoided; which also need not greatly be feared, since in this case no great wound is inflicted, and experience shews, it may be healed again with small trouble: for in this manner I have several times administered this piece of Chirurgery with good success.

De Diemer-
broeck, A-
natom. l. 9.

XVII. If the Ribs be strong and broad, and not small, and the Patient elderly, then I would bore a hole in a Rib with a Gimlet, and this operation would be safer than any other, for the Vessels that arise from the lower part would suffer nothing, because the hole should be in the middle of the Rib, and the matter might go out freely; and there would be no danger of a *Fistula*, though the matter should run for a whole year; and then the Lungs and Chest would suffer less from the external Air. Hippocrates, lib. de int. affect. intimates, that this operation is very safe, because no flux of blood can be feared.

Epiphanius.
Ferdinan-
dus, hist. 32.

XVIII. The Readers must take notice, that this operation is often performed according to art, and yet no egress of Pus perceived, because it sticks, not floating upon the diaphragm, but enclosed in a bag, made by the connexion of the Lungs with the succingent membrane. ¶ One had been long ill of an *Empyema*, at length sagacious nature seeking an out-let for the Pus, produced a Tumour on the side, which once perceived, the Physician ordered the opening of it, nothing run, contrary to expectation; wherefore the Patient was left, to regain strength, he slept upon his fore side (because they cannot lye upon their sound side, by reason of the abundance of Pus that lies upon the *Mediastinum*) but in his sleep all the Pus ran out: And when he was asserting that he was cured, because he could breathe better, he died suddenly. Here Chirurgions may be admonished, never to leave abscesses open, without a Tent; because although nothing burst out of them in the operation; yet, because they reach not the matter, the Pus, seeking a passage for itself, finds the next hole, and so, for want of a Tent, runs all out, and sudden death follows. ¶ If the wound be narrower than you would have had it, or the matter be thicker, then it must either be sufficiently dilated, with a crooked incision Knife, that has a Silver button at the end of it; or the matter must be attenuated by injection of Honey and Wine with a Syringe, and drawn out. Yet in extreme danger of suffocation I should prefer dilatation of the Wound, which is done quickly and safely, far before injection of Wine and Honey, which must needs increase straitness of Breast, the matter not being diminished before.

Petrus Bo-
rell, of f. 72.
cent. I.

Scultetus,
Tab. 33.

XIX. When nothing would doe good, and I was thinking of opening the Breast, and when the thirtieth day was over since the breaking of the *Imposthume*, I proceeded to smoking of Tobacco, after the usual manner, in a Pipe, and to take the decoction of it hot, with Sugar, upon which there followed a wonderfull excretion of Pus by cough, and in great quantity, and it was onely used twice; Take of Leaves of Tobacco 1 ounce; boil them in

2 pound of sweet water, till half be consumed; add in the end some Leaves of Mallow, Branc urfin and Violets. Strain it, and give it often.

Epiph. Fer-
dinandus.

XX. The *Mediastinum* in Man has not so great a cavity as in Dogs and other Creatures. It happens sometimes that purulent matter is gathered within its two membranes, after an Inflammation, which cannot be cast out by the Lungs. Therefore we are forced to pierce the *Sternum* with a Trepan, that so when a hole is made, the Pus may be got out by the help of Tents, Sponges, and other Instruments.

Barbette,
Chirurg.

XXI. Here also we must observe, that sometimes an *Empyema* is contained in its proper coat, and so it comes to pass, that it bewrays it self outwardly by its Swelling; and then it is called by the Latines, *Vomica pulmonis*, i. e. an *Imposthume of the Lungs*. In which case, do not expect, the coat should break of it self, for afterwards the Pus, running all about, is drawn with more difficulty out of the Breast; but the first opportunity you have, open it, and chuse no other place, than the most prominent part of the Tumour.

Idem.

XXII. Although this that I propose be a hazardous Remedy, yet, if we would leave talking, it is a most excellent one. The intercostal Muscles of the *Thorax* must have a potential Cautery applied to them upon the diaphragm, between the fourth and fifth Rib, till an *Eschar* large enough do arise, which will be in about three hours time; then it must be opened with a wound wide enough, and this is therefore needfull, lest if Incision should be made without such a Cautery, the wound should close sooner than it ought: for it is necessary the lips of the wound should be a good distance one from another (which in a round wound is most certainly true) that the outlet for the Pus and filth may be the freer. But care must be taken that the Pus run not all out at once, with respect to the Patient's strength. I have seen some cured this way, to a wonder.

Bontius,
Med. Indor.
c. 13.

Medicines especially made use of by eminent Physicians.

1. I have cured several who have been given over for dead, with this Juice; Take the reddest Leaves of a fresh Cabbage, chop them, put the Milk in a Pot, boil it close covered. This Liquour may be given morning and evening with Sugar.
2. This Decoction has an admirable virtue in breaking an *Imposthume* in the Lungs; Take of Hyssop-leaves 2 handfulls, Squill 1 ounce; boil them well: then take of the Decoction 5 ounces, Syrup of Horehound 1 ounce, Oxyssel of Squills half an ounce. ¶ Also Horse-dung mixt with Honey or Oxyssel of Squills, and applied to the Breast, is very good.
3. Two drachms of Venice Turpentine washt in Barley water, mixt with Liquorish powder, is very good: But it must be ripened, discussed and cleansed.
4. When the *Imposthume* is broken, that the matter may be raised by spittle, and the Ulcer cleansed, Honey and Water wherein Turpentine has been washed, or an Emulsion of Turpentine, is very good.

Joh. Heur-
nius.

Hier. Mer-
curialis.

Riverius.

Sennertus.

Epilepsia, or, The Falling-sickness.

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I. *Petrus Saliv. Diversus, l. de affectib. partic. c. 3.* proves clearly that the Epilepsie is caused by Blood, from *Hippocrates, 4. acut. tom. 23.* He judges the cause to be an Irruption of the blood into the upper parts, and a Repletion of the vessels of the brain made on a sudden, which being of a heavy nature, and it may be also of a molesting quality, causes the Epilepsie, while nature rises to the expulsion and discusion of it. *Hippocrates* in the same place calls that Oppression of Blood, *ἡ ἀπὸ τοῦ αἵματος ἐπὶ τὸν ἄνω λόγος*, in *Epidemio, αἰματωρὰ βρογχίτις*. *Foësius*, in his *Oeconomia*, translates it, the stopping of the Blood flowing with violence and swelling. By which words *Hippocrates* intimates, the interrupted Circulation of the blood was known to himself; as is clear from his Book *ἡ τρεπὸς*. Nourishment passes to the Hair, and Nails, and to the outmost superficies of the Body, from things within; and from things without, nourishment passes from the outmost superficies to the inner parts. And since the innate heat goes in danger of being extinguished by this Repletion of the vessels, through the abundance that threatens Suffocation, no other Remedy to prevent so great a danger seems to be indicated, than plentiful Blood-letting. *Saliv.* in the said place, does therefore assign the very same Cure to an Epilepsie, when it is bred, as to an Apoplexy, which arises from the same cause, that is, plentiful Blood-letting in the inner Vein of the right Arm, according to *Hippocrates* his opinion, in the forequoted place. ¶ Yet, at this day, saith *Sennertus*, scarce any one would advise or attempt any such thing in the very Paroxysm, seeing at that instant neither Blood can conveniently be let, nor, if it could, were it (in his Judgment) either safe or beneficial; by reason of the violent contest between Nature, which is then highly oppressed, and the morbid cause, as the hurt in respiration and other actions, by reason the influx of animal spirits is interrupted. The Physician therefore might incur the censure of rashness, and pay for it with disgrace, if the Patient should dye, upon letting blood while he was in a Fit. ¶ It is the part of an experienced Doctor (saith *Paul Barbet*, in his *Praxis*) to

distinguish a-right about letting-blood in a Fit. ¶ I, and other Physicians with me have observed, that, taking away a little blood in the fit has sometimes done good, namely, to get motion in the Blood, which is as it were coagulated by an austere Acid: otherwise Blood-letting, both in the Fit and out of it, does, in a manner, always so much harm, that the fits grow more violent every day after Bleeding, saith *Deekers* in his Notes upon the place.

II. In the year 1675. a Noble Boy of Berne was upon a Fright taken with a cruel Epilepsie, his face was red and swollen, and when his Fit had held him already three hours, by my advice, and *Dr. Cramer's*, the Cephalick Vein in his left Arm, was opened, whence the Blood sprang with such violence, that one might have taken it all away in the twentieth part of an hour. The Fit was then presently over, and the next day he was well, without any Relapse. A red hot Iron had been applied to him a little before. ¶ *Hippocrates, 2. Epidem. sect. 5.* bids us open the inner Veins, if the Disease be very violent. ¶ A Girl about twelve years old was frequently taken with an Epilepsie, and when she was taken with a Pleurisie she was several times let blood, and from that time was never troubled with her Epilepsie. Hence you may gather the efficacy of Bleeding in this Disease. ¶ A Boy eight years old was taken with an Epilepsie from Plenitude, and when all other Remedies had been tried in vain, he was let blood in the Arm several times once a month, and recovered, through the great alteration of his Body, by this Remedy: which nevertheless should scarce be allowed, except in a Disease by consent with the venous kind, and exceeding hot Blood.

III. *Ben. Sylvaticus* cured a middle aged Nobleman of an Epilepsie, by opening the hæmorrhoid Veins once a month.

IV. A young Man about twenty five years old was troubled with the Falling-sickness once a month, I opened one of his temporal Arteries, and when he had been free from it four months, and there was hopes he would be well, he brought it upon himself again by drinking strong Wine, which was his custome. ¶ A Man about forty three years old had frequent Fits, a Wind running up from his Hand to his Brow upon the same side: From whom I (guessing it came from some habitous cause) took three ounces of Blood. But the bandage being loosed, much Blood ran out, after which fortuitous evacuation, notwithstanding he was well a long time after, so that he seemed cured. ¶ *Alphonfus N.* a very melancholick person, who from a child had been troubled with this Disease 9, 10, 15, 20 or 30 days together, in nature of a certain light vapour, ascending gently from his Arm to the upper parts, was very much relieved by Bleeding in the temporal Arteries.

V. *P. Merenda* writes, that in a very violent one, that comes often in a small interval, and will not yield to Remedies; he has, by applying Blisters to their Neck and Shoulders, brought several to the former use of their Reason in a short time, and freed them of their Fits, who afterwards by orderly cure were restored to perfect health. But observe, that they, as also Issues and Setons, should be used onely when the Disease is essential to the Brain; and after Purging, except the Disease be very urgent.

VI. By a Seton, according to the opinion of that most Learned Physician, *Hollerius*, I cured a young Man about twenty years old of the Falling-sickness, who had frequent Fits of it before; the ichorous matter, as it may justly be believed, which fed the Disease, being by this means derived. ¶ An Epilepsie succeeded the Cure of a Ring-worm from a hot humour in a Gardiner, which by *Spigelius* his advice was cured by putting Hellebore root into a Seton in his Arm. ¶ Yet it is not always safe to put Hellebore root in a wound; for while

Riverius, cent. 4. obs. 28.

Rhodius, cent. 1. obs. 64.

Idem, obs. 65.

Severinus

Jacotius

Paræus, l. 9. c. 24.

Rhodius, obs. 62. cent. 1.

pain

Idem,
Analec.
p. 621.

pain encreases by attraction of the humours, the strength sometimes wasts, according to my own and others observation.

VII. I resolved to open another Issue in the left Arm, because I understood, a Disease of so long standing must now be in the Brain, for it is certain the brain abounds with these juices, for which purging by the Belly seems not sufficient. Which remedy was of that power, that from thence forward he fell more rarely into fits, and they were milder, so that those who were by, accounted him perfectly cured.

Mercatus,
conf. 3.

VIII. *Adr. Spigelius* tells of a Nobleman who had often struggled with an Epilepsie for twenty one years, and when *Aquapendent* had trepanned his Skull for a grievous fall, he had got down a pair of stairs, he was never after troubled with a fit. Therefore *Rondeletius* does not without reason approve of this remedy for a confirmed Melancholy in the Brain, though *Forelius* think it dangerous.

Rhodius,
Obs. 66. l. 1.

IX. *Erasmus* disapproves of rubbings in the fit, because the draw nothing from they place affected, and because the numbness of the Limbs admits not of their virtue: But the reason they are made use of is, that the drowzy senses may be recalled to their office, which thing violent rubbing in the Shoulders, Arms, Back and Thighs, with a coarse cloth, doth perform effectually. Moreover this advantage accrews, that the parts are thereby heated, and the humours and Spirits drawn thither, whereby there is a retraction made of the vapours, that are creeping upwards, to the lower parts, because of the rubbing, upon which restitution of the senses follows.

X. Whereas some set up the Sick, keep their Arms and Thighs wholly from the Convulsive motion, or strain them into this or that posture: Farther, whereas they blow sneezing up their Noses, and pour strong Cordials into their mouths, or use cupping and scarifying, and by other modes of administration treat the caducous but roughly, and disturb the manner of the Paroxysm; this course, I say, is often followed amiss, because by this means Nature has a double trouble, one from the disease, and another no whit less from the by-standers and attendants; when it had been far better, that, the fit being suffered to take its own course, the Patient had been onely one way afflicted.

Willis.

XI. We must take notice that the usual Purges must be made use of frequently, that is, once or twice in a week, and the course must be continued for several months; yea, sometimes we must go to the stronger Purgatives, according to *Masfarius* his rule, who says, that the Epilepsie is seldom cured, because Physicians are always upon gentle means. For this reason Chymists are wont to give the usual Purgers, which draw the humours from the most remote parts. If a happy event may be expected from such Medicines, it depends especially upon *Mercury*, calcined either with Gold, or by it self in a sand Fornace, with a long regiment of fire, taking especial care, that no part of it remain crude and volatile, which would give a great violence to the Medicine, which would otherwise purge gently enough if four or five grains of it be given with *Pil. Coch.* or rather with some phlegmagogick Extract.

Riverius.

XII. *Septalius* says, he never saw any relieved by a Vomit, but that he observed, they were all made heavy headed. Reason tells one as much, because a Vomit disturbs the head more, which is ill already. And this is very true, where the Brain is primarily affected, or when the matter lies in some part in the habit of the Body, because this remedy gets nothing thence. And Experience confirms it, which has ever had ill success upon giving Purges, whether upwards or downwards. But if the Epilepsie hath had its first rise in the Stomach, and the adjoining places, and the humour, that is the

cause, can easily be derived thither: If the Patient can bear a Vomit, the worst that can follow will be some small disturbance of the head, which will quickly be at an end.

XIII. The success of Vomits in an epileptick Paroxysm is dubious; *Septalius* l. 6. n. 5. utterly disapproves it. Nor is it good, though it by consent with the Stomach, for it is one thing to cure an Epilepsie before the fit; another thing in the very fit; in this we deny it, for the reasons alledged by *Septalius*, in the other we have no reason to scruple it. Whether in diseases above the Throat a Vomit be of any use, although the humours seem to be carried to the head? *Santorellus*, l. 22. *Antepr.* c. 4. answers affirmatively. *Fridericus Hoffmannus* m. m. l. 1. c. 5. It is another case, when Poison, for example, Hemlock, taken into the Stomach, produces an Epilepsie; For Vomits, according to *Septalius* his opinion, would not be safe: These are his words: *Have a care you do not give a Vomit in a fit of an Epilepsie, I have seen some that have tried this in a fit, induced thereto by the Authority of some Writers, who have killed their Patients outright: For the Head being more filled by the violent motion, and the matter residing in the Brain being stirred, they bring them to a perfect obstruction, whereupon an Apoplexy usually follows.* The most excellent *Frider. Hoffmannus* also, l. 1. c. 9. disapproves of Vomits, though the Epilepsie be caused by consent of the Stomach, and although he seems to grant them out of the fit; yet in their opinion they can scarcely be given, when either the Paroxysms are continual, or invade at very short intervals. But these things are not of such moment, as to forbid Vomits; for *Septalius* seems to respect any periodical Epilepsie, even that whose cause lies hid within the Brain: and then it seems to be grounded on an opinion, that is false and now exploded by most, i. e. that the Epilepsie arises from the obstruction of the ventricles of the Brain, and in the stirring of the humours by some violent agitation caused by Vomits, even in the head, the ventricles of the Brain may easily be wholly obstructed, and an Apoplexy caused. Besides, when Vomits are given to get Hemlock out of the Stomach, they are not opposed to an inveterate Epilepsie, or one that is otherwise deep rooted, and has tired out the Patients with many fits, but to a new one. Finally, they cast out the proximate and primary cause from the Stomach, which being removed, the Epileptick fits forthwith, or within a little time, abate, and shortly altogether cease. And reason does not onely persuade the necessity and benefit of Vomits in this case, but experience also proves the same: for a Vomit immediately cured six little Girls, who at one and the same time had eaten Hemlock, and thereupon had been taken with most violent and tedious Epileptick fits; while two Boys that had eaten it at the same time, who could not be made to vomit, though they were provoked to it, died of the violence and tediousness of their Epileptick fits, who undoubtedly might have been delivered from death, if the excretion of the Hemlock roots, which Nature endeavoured, had been timely facilitated with Vomits by some skilfull Physician. *Santorellus Antipr.* l. 21. c. 10. favours this opinion, and advises to vomit, upon taking poison at the mouth, and says, the use of them is both safe and proper, because they immediately cast out the Poison. Seasonable Vomits did two Girls and two Boys good, who had swallowed Arsenick. Also from *Faber Lynceus*, *Hist.* 12. to a young man who had swallowed *Mercury* sublimate. And there is not a Practitioner, who, making little reckoning of the Convulsions, commends not Vomits, and if the case will allow it, who gives them not upon taking Poison. And use has taught, that the sooner they are given, the more speedy and firm health is restored, but if they hastened to Alexipharmacks, death was hastened, or the Disease with its Symptoms prolonged, as it happened to one in *Timaeus*, l. 7. casu 4.

Wepferus,
de cicut. a-
quat. p. 389.

XIV. If

XIV. If by reason of an Epilepsie caused by Hemlock (or Poison) continuing a long time, or having many fits in short intervals, we cannot endeavour the evacuation or expulsion of it out of the Stomach, the President of the nervous system must be averted from those tumults, and as he wanders must be reduced into the way, by such things as are usually given in fits of the Falling-sickness, and of the Mother, such as are things that awaken the drowsy Senses. Let things be held to the Nose that breathe some acrimony, made of Savory, Penny-royal, Rue, Marjoram, Flowers of Lavender, Rue, Seeds of Angelico, Rue, Lovage, Mustard, Berries of Laurel, Juniper, Pepper, Cloves, *Asa fetida*, Castor, and the like, tied in a knot, and steeped in Vinegar or Wine, Balsam, and Oil of Amber, of Rue. The urinous Spirit of *Sal Ammoniack* is excellent for this awakening, which, they say, the most excellent Dr. Sylvius always carried about him, that it might be at hand in sudden cases of this Nature. Indeed I hold such topicks near to the Nose, but by no means anoint the Nostrils with them, or put them deep in, because when they are anointed or thrust in, I have known them very troublesome a long time after, let Matches of Sulphur be held to the Nose, let the contracted fingers be opened by a strong man, let sharp Suppositories and Clysters be given, let the teeth be opened, &c.

Idem, p. 324.

XV. In an Epilepsie, (and the *Vertigo*) especially if matter be supplied from the whole, when this is first diminished. Diureticks do conveniently carry off the reliques of the humours by way of Urine, chiefly if it be sympathick, and not inveterate, which at once open obstructions, dissolve the matter, and carry it off, such as Hartman's Antepileptick Spirit, volatile Spirit of Vitriol, which is contrary to it by a peculiar faculty.

Frid. Hoffmannus, m. m. l. l. c. 12.

XVI. A Maid was often taken with Epileptick Convulsions. One who thought there was fraud in the case, and that she counterfeited the Disease, that he might detect the cheat, put live Coals into her hand: She perceiving nothing, endures all the burning of the coals. Hereupon so great a wound was made by the fire in the Palm of her hand, that a Chirurgion could scarce heal it in some months time. In the mean time a Fever invaded her, which as soon as it was kindled, all her convulsive motion ceased afterwards. For Hippocrates in *Coacis*, & 2. Aphor. 26. judged aright, that it was better for a Fever to come upon a Convulsion, because it attenuates and dissolves cold and tough humours stuffed in the Nerves, as Galen comments upon it.

Bartholinus, Cent. 2. Hist. 68.

XVII. Sternutatories may both cause and keep off an Epilepsie. The first is evident from instances of those, that by the continued use of sneezing powders (in dimness of sight, thickness of hearing, &c.) have brought Epileptick motions upon themselves: The other is evident from their efficacy, because they relieve the head, and discuss what is troublesome in it. In this place, and upon this occasion, I will relate what I have very often observed in Epileptick persons, namely, that sneezing sometimes precedes, sometimes follows an Epilepsie: For I have seen in some people, before the fit took them, several sneezings, and those frequent enough, twenty, thirty, or forty often precede, and that for a day or two, every hour, so that they have been forced to stop the sneezing by applying warm milk, and afterward this ingrate and hated Disease has followed, in as much namely as it darts its acrimony inwardly upon the meninges, and then shakes the Cover of the Brain, by consent also it passes to the out parts, and the very Nerves of the Nostrils, and is as it were shaken off by Nature, that it may free it self of this unhappy Disease. In others I have seen the Paroxysm end with this very explosion and excretion, attempted at least, in as much as the rest, which nature can subdue, and cast outwards, is dismissed and exploded another way, without any

great Vellication. Since therefore if two things do the same, it is not the same thing; truly it behoves the Physician to help Nature, yet so as not to hurt her, and therefore he should be very careful how he uses them. 1. They must be mild, for Nature abhors strong ones, and if she be forced violently upon what she would do of her self, she does it forced, and as it were against her will. 2. They must be Cephalicks, which may also strengthen the head by their sweet smell: Or things good for the Nerves, as powder of the Flowers of Lily Conval, Castor, Amber. 3. If the Patient abound with humours, and be not so very sensible, in which case the Disease may very easily be brought upon one by any irritating thing. 4. If the fit be very strong, and there be a want of sense, or a detention of the principal faculties, more than the Convulsive motion. 5. And therefore they must be given to raise one out of the fit, or in the declension of it. Hence it is that *Aurelianus* denies Sternutatories to be good for Epileptick persons.

Wedelius, de S.M. Fac. p. 210.

XVIII. I do not permit the use of stinking smells but upon urgent necessity; for it is better, that the fit should be lengthened out, and spent by degrees, than to fill and make heavy the head with stinking smells, and defile the substance of the Brain and Spirits: Therefore do not use them, unless the fit have held some hours, and other more gentle means have been first tried in vain. ¶ The main controversy is about the Agate Stone: for *Dioscorides* says, the Fume of it brings the Falling Sickness: *Trallianus*, *Aëtius*, *Pliny*, *Galius*, and others, affirm the same. *Avicen* and *Mesue* are of the contrary judgment, that it is good for an epileptick person to be fumed with Agate, and that the Oil of it is good for the same. ¶ *C. Piso* commends it highly; The smell of it, saith he, is a most present remedy, as I have experienced in several, and in that famous French Virago, Maturina, who being given over for dead by her Physicians, upon her first smelling of this Stone was raised from her Bed, and beyond all expectation ran immediately with great cheerfulness to the Table and Dice. The controversy is decided by distinguishing Epilepsies, for this fume is good in that, which vapours ascending from the womb do cause, for the virtue of strong smells is such, that they discuss hyterick Fits, if they be held to the nose: But stinking smells bring an Epilepsie, that comes of any other cause.

C. Piso.

XIX. Stupefiers of the Nerves, because by dulling their sense, they render them less affected with trouble, when they are irritated, and therefore less convulsed, if the gentler sort of them be given in grievous and dangerous Convulsions, I have often found them do much good: In which respect I think Treacle, &c. may be proper, both because it infringes the venomous power of the Epilepsie, and because it dulls the exquisite sense of the nerves, and that it is given rather for that reason, than because it strengthens the nervous kind.

Platerus, de fun. l. 1. p. 77.

XX. If it have its rise from the Womb, we must take notice, not to give sweet smelling Medicines, for they both make the head heavy, and cause the

Semmerhus.

XXI. Things that add strength to the nervous kind, are appropriate remedies, which are made of capital and arthritick simples, which since they supply the nervous kind with new strength as it were, that it may be the better able to resist, what is troublesome to it, use not improperly to be added to other Medicines, which we use in the Epilepsie. However not with the same mind or intention; but because they believed, the Epilepsie was caused by Phlegm stopping up the Brain, not onely these things appropriate to the Nerves, are hot; but in the cure of the Epilepsie they used for the most part things that might cut and attenuate thick Phlegm, and the hottest remedies. Which notwithstanding, if the Epilepsie come from the irritation of the nervous kind, because they heat the Body

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more,

more, I observe they cure not at all; so I know by experience, they rather irritate, and promote, and exasperate the fits: And because I either found, or had it from credible persons, that they doe more good than hurt with their heat, except in a cold and moist constitution of body, or when they have moreover some other property, whereby they resist poison, or this disease; I think they should not otherwise lightly be used.

Platerus.

XXII. We affirm with *Jacchinus* and others, that a Decoction of *Guaiacum* is proper for those that are subject to the Epilepsie, because we must especially have respect to the antecedent cause, whereby the proximate is fomented and sustained. And it often consists in gross impurities gathered in the whole Body, or Brain, Womb, Stomach, &c. which do indicate Incision, Attenuation, Solution, Purging by Urine, Stool, Sweat, &c. and therefore the consumption of themselves. For these, as they are the subjects and antecedent causes, being removed, the noxious faculty existing in them is also removed, that is, the malignant Vapour, which being exalted, or raised by evaporation, does otherwise produce an Epilepsie. And a Decoction of *Guaiacum* is of great service in respect of the present indication, as by inciding and attenuating it dissolves this antecedent cause, by cleansing it evacuates, and by provoking sweat it renders the mass of blood defecate, not without strengthening of the Bowels, through its amicable, astrictive faculty connate to it. Nor is the decoction of *Guaiacum* onely usefull in rooting out the Cause, but its acid Spirit and Oil also is very good to allay and conquer a fit. We must take notice concerning Hydroticks, that they are proper, generals premised. 2. That the decoction it self of *Guaiacum*, according to the different nature of the Subject, must be prepared with things appropriate to the morbid cause; taking care especially, that in boiling it the Spirits do not exhale.

Gr. Hortius, dec. 2. prob. 9.

XXIII. There are some that take *Guaiacum* for *Lignum Heracleum Rulandi*, induced thereto both by the similitude of the name, and because he often uses a decoction of this wood in the same diseases, in curing of which he glories, that the Oil has done good. *Quercetan* on the contrary thinks it is drawn by distillation off Box wood: Others think rather from the Pine: Others from the Larch-tree, for this reason especially, because *Oleum ERACLIVM* makes by transposition of the very same Letters *LARICEVM*. We, saith *Clossius*, although we are not ignorant that the *Oleum Heracleum Rulandi* is made of Hazle wood *per descensum*, and that his Antiepileptick Conserve is made of it, not onely because Hazle nuts were called by the Ancients *Heracleotica*, but especially because *Valentinus Rulandus* writing to *Fabricius Hildanus*, *Obs. 84. cent. 3.* plainly calls the Spirit and Oil of Hazle Wood *per descensum*, *Heracelinum*: Although, saith he, the thing be so, yet I constantly affirm, that Oil of *Guaiacum* may very fitly be used in its stead. For the acid Liquor of *Guaiacum* hath the same virtues and faculties, and shews the very same effects, which he attributes to his *Oleum Corylinum*. Moreover, as experience testifies, the specifick properties of Liquors perish in descensory distillation; which being consumed by the fire, a more fixt vitriolick Spirit is elevated, together with a stinking Oil and Gum, or Refine, which as they are in great plenty in all Wood, so in their power of acting and virtue, they differ not much one from another.

Idem, l. 1.

XXIV. Let Candidates in Physick observe this, that the seed of *Poenony* is more gratefull than the root, wherefore the seed may be put in Childrens victuals; on the contrary, the root is more convenient for Clysters. It is better to use the powder of the root than the *secula*; for in preparing the *facula* of simples, their virtue is washed away with the *menstruum* that is put to them, yea, just like Ma-

gisteries, they are made like an useles *Catz*, or the *menstruum* gives them some asciticus qualities.

XXV. Candidates in Physick must also be told, that if, by God's Blessing, they would cure an Epilepsie according to their desire, they must account among Vegetables the Male *Poenony*, rare to be found; among Animals, *Castor* or *Swallows*; among Minerals, *Vitriol*, to be recommended to them as *Specificks*. Some indeed will highly commend the use of *Cinnabar* of *Antimony*; but it should onely be, where the Epilepsie is caused by Worms, otherwise in my opinion it is no convenient Medicine for Epileptick persons.

S. Pauli, 29. Bot. cl. 2.

XXVI. While it was my custom to use Oil of Amber, in people troubled with Epilepsies, Convulsions, Imposthumes in the Lungs, for those that were made purulent by a Catarrh falling on the Lungs, when I observed it was odious not onely to the Patients, but to the by-standers also; and that it was distastefull to most, by reason of its too much fetidness, whether they used it by anointing outwardly, or in Lozenges or Pills inwardly, or any way else; I have now for some years used Balsam of *Peru* in its stead, to the advantage of my Patients. I know, Chymists do now correct it, and take away the offensiveness of the smell by repeated distillation after washing it: But I have found that after washing it is much weakned, and does but little good, wherefore I think we should rather use Balsam of *Peru*, or the natural Balsam brought from *Syria*, till we are taught how to distill an Oil of Amber without stink.

Heer. obs. 17.

XXVII. A Boy fell into an Epileptick fit once a day for fifteen days together. The best Physicians thought it came from some disorder in his Head: But the more Medicines they gave, the worse the Disease grew; so that in twenty four hours he had above one hundred and fifty fits; yet they were small ones, for he had onely a little commotion of his Head, with a bubble at his Lips. Whereby notwithstanding they knew the Disease was not from any disorder in the head, but by consent with the Stomach: Wherefore when they left off to trouble him with Physick, and strengthened him, the Child grew very well.

Trincavella, l. 1. conf. 25.

XXVIII. I observed wonderfull shapes of Worms in an Epileptick Woman: as she was athirst she drank greedily and frequently in her journey, coming from *Italy*, of any Water she met withall. Her Epilepsie was very grievous, with a swelling and an ill colour all her body over. She was not relieved by Antiepilepticks. At length, upon the repeated use of my Mercurial Pills, she voided a great quantity of multiform Worms. As soon as they were displaced, her Epileptick-fits likewise ceased. *Barbolinus*, *hist. 7. cent. 4.* He also, *Cent. 6. Hist. 20.* produces the example of a young Man often troubled with Convulsions, whose cure succeeded much better, after his voiding of *Ascarides*.

XXIX. A Youth about fifteen years old had a pain in his *Pubes*, afterwards, as his pain shifted to the left-side, his Spleen grew presently ill, and from Sympathy with it, the Brain; for he fell into most violent Fits of the Falling-sickness, which came upon him onely by pressing the region of the Spleen with ones finger. Among several Remedies nothing was better than Chalybeate-wine, or black Hellebore, upon taking of which he voided so much black Choler, that at last he came to himself.

Tulpius, obs. serv. l. 1. c. 9.

XXX. An Epileptick Maid was cured by the use of Vinegar and Water, she took a gla's of it every day in the morning, and before the time of her Fit pure Vinegar. When this disease was cured, she was troubled with a pain in her Limbs, which also was cured by the use of the Bath.

Riverius, Cent. 4. Obs. 1.

XXXI. I have known some young Men, who might easily have been cured of this disease: but because they would not abstain from Wine, they became incurable. All Men know, that the Epilepsie

lepsy affects the Nerves especially. And because Wine turns sowre in all, who have an infirm Stomach and a weak Brain, and Vinegar is an open enemy to the Nerves; hence Epileptick persons may easily gather how much they ought to avoid Wine and Venus. Besides, according to Aristotle and Averroes, the Epilepsy is caused like sleep, that is, by a vapour, wherefore all vaporous things, especially strong Wines should be avoided.

Heer Obs. 24.

XXXII. It is disputed by many, Whether *Apium* be hurtfull for Epileptick persons? That by *Apium*, Parsly must be understood, no Man will question who reads a passage in *Pliny*, l. 20. c. 11. and *Galen* 2. de alim. facult. for this is the true garden or domestick *Apium* of the Ancients; and ours is the *Paludarium*, or *Apium Palustre*. *Pliny*, in the cited place, says, That if a Lying-in-woman eat Parsly, the Child that sucks her will have the Falling-sickness. *Avicenna* rejects Parsly, especially from among Meats, because, by an innate property, it causes the Falling-sickness. And others, following their steps, forbid it. *Jacchimus* is of another judgment, opposing *Galen*, and in a Counsell for an Epileptick Child, allows of Parsly. But an opinion that is held by so many learned Men, must not be esteemed a figment, it being, without doubt, founded on Experience, which must be consulted. They, to whom it did no hurt, were either not inclined to an Epilepsy, or they used it onely as a Sauce, and not as Meat: So *Galen*, in his advice, allows one to taste it at least; as he does *Alexanders* also, by which notwithstanding the head is filled, as he writes. But, the Ancients that are quoted, speak of it taken as Meat.

Sennertus.

XXXIII. In the cure of this Disease we are forced to leave the common method: For the prescriptions of the Dogmatists, in which they usually endeavour to carry off, and totally eradicate the morbid cause onely by Purges, doe little or no good in the Falling-sickness, yea, they use often to doe harm. I have known some eminent Practitioners, who totally omitting the train of therapeutick intentions, have betaken themselves to certain Empirical Medicines, without any provision for the whole.

This sort of Practice, though sometimes it succeeded well; yet it would much more certainly have attained the proposed cure, if by other Medicines also, when the body had been rightly prepared, all impediments had been removed. Wherefore the Indications about the cure of the Falling-sickness, will be either Curatory, which respect the fit, or Prophylactick, which respect the cause of the disease. As to the first, general Evacuators are scarce of use: But the thing of most importance, is, to fix the animal Spirits, that are too fierce and volatile, and to suppress their explosions already begun. To which ends, two sorts of Remedies especially conduce, that is, 1. Things that give a check to the animal Spirits, when they are apt to be unruly and disorderly, and that repell them as it were with a smell ingratefull to them, and bring them into order, which thing, Medicines endued with a Volatile and Ammoniack Salt, or with a Vitriolick Sulphur, effect; Such as are Salt and Oil of Amber, Spirit of Bloud, Hartshorn, Soot, Tincture of Castor, &c. for these taken inwards, or applied to the nostrils, often give relief, and are thought to drive away the evil Spirits of this disease, just as the fume of a Fishes-gall burnt drive away the Devil in *Tobias*. 2. The Animal Spirits are either diverted or hindered from making their explosions, when they are enticed and kept employed in some work familiar to them. Wherefore, when a fit is violent, rubbing all the body over, and continued, often does good. But the most of a Physician's care lies in preservation, that the cause of the disease being removed, or the root cut away, all the fruits may wither. The Medicines requisite to this intention may be reduced to these two heads chiefly. 1. That

the fewel of the Disease, supplied immediately, from bad blood, or the nervous juice, and more mediately, from the bowels and first ways; Then 2. That the evil disposition of the brain, and of its inhabitants, the Spirits, which is peculiar to the Epilepsy, may be removed. As to the first thing indicated, in this case, Vomits, Purges, Alteratives; Bleeding, Issues, &c. are proper, in as much as the impurities are withdrawn from the bowels and humours, and their dyscrasies amended; And although they cure not the Epilepsy, yet they remove impediments, they raise nature, and excite her to encounter the enemy; also they prepare the ways, so that Specificks may more certainly exert their Virtues. As for Specifick Medicines, onely which indeed, though not always, are reckoned to reach the cause of the Epilepsy, it is wonderfull by what power of acting they use to doe good in this disease, seeing they are taken without any sensible evacuation, or even perturbation in the bowels or humours, following thereupon. If we may guess, since we hold that the procatactick cause of the Epilepsy consists in a heterogeneous conjunction, arising in the Spirits, those inhabitants of the brain, and inciting them to preternatural explosions; it will follow, that what things resist or remove such a cause, must be of such a nature, as that by strengthening the Brain, and contracting its pores, they exclude that conjunction, and so fix the Spirits, which are up and down the middle of the brain, by dissolving their conjunction, that they will not any more be apt and inclined to those irregular explosions: Not unlike, it may be, to *Aurum fulminans*, which, if it be ground with Sulphur, or be sprinkled with Spirit of Vitriol, it loses its fulminant virtue. And indeed we may discover such properties, either one or both in most Antepilepticks: for *Pæony*, *Mistletoe* of the Oak, *Rue*, *Lily Conval*, with many others, have a manifest adriction in them, so that it is very likely, their particles taken inwards, and so carried in the vehicle of the blood, or nervous juice, to the Brain, do so contract, and shut up its pores, which are too lax and open, that for the future they do not at all lie open for any passage of the morbid matter. Moreover, because these concretes do breathe out, as it were, an Armoniack, or dissipative scent, therefore they are said to depurate the animal Spirits, and to fix and strengthen them, when they are deprived of their heterogeneous conjunction. This virtue, depurative of the Spirits, proceeding from the Sal Ammoniack, is apparent in remedies, which are fetcht from the animal and mineral families, such as are preparations of Man's skull, Bloud, Amber and Coral; as the other astringent virtue is more powerfull in the parts and preparations of Vegetables.

Willis.

Medicines especially made use of by eminent Physicians.

1. If you cut the great Toe of the sick party any where, and anoint the lips of him that is in the fit, with the blood that drops from it, he will be raised immediately, according to *Didymus*. Ætius.

2. Salt of Corals preserves Children egregiously from Gripes and fits. ¶ Pills of Salt of Vitriol are highly commended in the Falling-sickness. ¶ This is famous for the Epilepsy: Take of Cinnabar of Antimony 4 ounces, pour on it Spirit of Vitriol, first let it stand in digestion 14 days, till it become like Gold; distill it in a strong fire by a Retort, and an elegant Spirit will come out, which keep. Then take Roots of Angelico, Pellitory of Spain, Pæony, each 1 ounce, Flowers of Rosemary, Cassidony, Lavender, Lily Conval, each 1 ounce, leaves of Marjoram, Scordium, each 1 handfull, Shavings of Elk's Horn, Man's skull, Castor, each 1 drachm and an half, *Diamoschu dulcis* half an ounce; mix them, pour

to them the best Spirit of Wine, till it stand 4 inches above, let them be digested in a close vessel in *Balneo vaporoso*, till the Spirit of Wine grow as red as blood, pour it off by inclination, draw it off per *Balneum*, till it grow as thick as honey, if there be 6 ounces of it, add 2 ounces of the Spirit of Vitriol above said. Digest them in *Balneo vaporoso* for a month, keep it. The dose is one or two scruples in a little Lavender or Peony water. ¶ Oil of Wine mixt with tincture of Corals, and a few drops of it given to Children, presently take away the fit.

3. This is a singular and experienced Plaster: Take of white Amber, Frankincense, each 1 drachm and an half, *Galbanum*, *Opoponax*, each 1 drachm and an half, Mistletoe of the Oak 2 drachms, Ambergreise 6 grains, Musk 3 grains, Seed of Male Peony half a drachm, *Labdanum* 1 drachm and an half, a little Oil of Nutmegs: Besirew it with powder of Cubebs, when you have spread it, and apply it to the coronal future.

4. I can certainly affirm, that I saw an Epileptick person above twenty five years old, cured onely by the use of 2 ounces of Weezle's blood, with 1 drachm of Vinegar. ¶ Take the Stones of a wild Boar, or of a tame one that uses *Venus*, and also the Stones of a Cock, dry them in an Oven, and powder them; let there be 2 ounces of the Boar's stones, and 1 ounce of the Cock's, then add twice as much Sugar. Let the Patient take some of this Powder with all his Meat, you will find it a most absolute remedy.

5. It has been found, by frequent observation, that children have been preserved from fits, by giving them 3 drachms of Syrup of Cichory with Rheubarb, as soon as they were born, before ever they had sucked Milk. ¶ I gave my own children 2 Scruples of Juice of Rue, with a little Gold, and by God's blessing they are free from Fits.

6. Many of our Country Folks have the blood of the Epileptick Person himself among their secrets, as a singular remedy for an Epilepsie. For in the very fit they take away a little blood from a vein in his Arm, and they give it him to sup with a rear Egg. Which experiment has freed not a few from the Fit immediately, and has rendred them free from it ever after. But after this Liquor they give him Cordials and Bezoardicks, to lay him to sweat; for so the matter of the Convulsion being stirred, and disturbed by his own blood, is discolled and evacuated by sweat. ¶ A most noble and sure Antepileptick Powder. Take of Man's Skull burnt, Man's Bones burnt, each half an ounce, Powder of the Bones of great green-Lizards 2 drachms, Mistletoe of the Oak, Root and Seed of the Male-Peony, gathered in the decrease of the Moon, each 1 drachm, prepared Antimony, Hoof of an Elk, an Ais, each half a drachm, White Sugar 4 ounces. Mix them. Make a Powder. The dose is 1 drachm, with a due quantity of Water of Hartshorn, Flowers of the Linden-tree, and Lily-Conval. ¶ An Amulet for the Epilepsie. There is a branch of Elder, that grows on an old Willow, pieces whereof hung about the Neck, have very happy success in either abating, or quite curing an Epilepsie. They must be gathered in the Months of September and October, before the Full-Moon. ¶ One of the second sprigs of a Willow cut into small pieces, and nine of them tied in a Linen, or Silken-rag, hung about the neck to the Mouth of the Stomach, either before or after a Fit, and worn so long, till it breaks, or falls off of it self, is an Amulet. The rag when it is fallen must not be touched with ones hands, but taken in a pair of Tongs, and buried in some remote place, lest it should be touched by the sick, or any other, and so infect them with the Falling-sickness.

7. A Medicine diminishing the Epilepsie; I have observed, that by taking 1 drachm of the Powder of Soapwort-seed, once a Month for three

New-Moons, the Fits have abated much, either in number, or violence. ¶ I have known many perfectly cured by eating a Wolf's Liver. ¶ A drachm of Peacock's-dung in Powder drunk in Wine, when the Moon is New, is a most excellent remedy, if it be taken once a month, for some months together.

8. I have known these two Powders very effectual; Take of prepared Coriander 2 drachms, Seeds of Peony, Purslane, each 1 ounce, Hoof of an Ais burnt, half an ounce. Mix them, make Powder. The dose 2 drachms in 2 ounces of Rue-water. Take of Man's blood taken away by Cupping, of Man's Skull each 2 drachms, prepared Pearl, Galangale, Zedoary, each 1 drachm, Mastick, red Amber, red Coral, Dittany, each 1 drachm and an half, flesh of a Kite, fat Raisins, each half an ounce. Mix them, make a Powder; Add 2 ounces of Sugar. The dose is 1 drachm in Peony-water every morning. ¶ Some account this a Secret; Take juice of *Carduus Benedictus* purified, and boiled up thick 4 ounces, juice of Yarrow purified 3 ounces, Sugar 4 ounces. Mix them, boil them into the form of an Electuary. The dose 1 spoonfull.

9. The Skin of a Wolf, taken off that part which sticks to the Spine, must be cut into the form of a Girdle about 2 inches broad, it must be girt about the Belly and the Loins, and worn always, that the inside of the Skin may touch the Flesh, the hairy side being put outwards. ¶ As soon as a Mare's Foal is foaled, it vomits up some matter, which unless one take up hastily, the Mare immediately devours it. This matter dried and Powdered cures the Falling-Sickness by certain experience, it seems a wonderfull thing. Oil of Vitriol rightly prepared, and 5 drops of it taken with Broth in the morning, for several days, has cured many of this disease. ¶ I approve of nothing better, than Peacock's dung given in distilled-water of *Carduus*, or Yarrow, than which, I have found nothing more effectual.

10. Cinnabar of Antimony in equal weight with Magistery of Corals, is a Specifick even in inveterate Epilepsies; it takes away the disease onely by Sweat at repeated turns, and necessary evacuations premised. The dose is from 10 to 16 grains in some proper liquour.

11. Oil of Box is admirable; for it is Narcotick, and Narcoticks by stupefying the Sense, use to hinder the Fit.

12. In a Fit of the Falling-Sickness I give order to rub Rue between ones hands, and to hold it to the Nose, or to put a little of it up the Nostrils, for by this means I have brought innumerable out of their Fits. ¶ Let the following Amulet be hung on childrens necks; Take of green Peony-root half an ounce, of Male Peony-seeds, namely the black, 1 drachm and an half, when the Root is cut, and the Seed bruised, put them in a bag and hang them on. By this Suspendory I have seen the Fits cease to a wonder, and have often experienced the great and excellent virtue of it.

13. Dissolve the scrapings of the Whitest Amber in Spirit of Wine, that it may be tinged, filtrate it, and evaporate it to half. It is a great Secret in the Falling sickness. It may be given to 15 grains in some appropriate Water.

14. This is admirable; Take Ears of Barley, when they begin to grow ripe, burn them to Powder, of which give a little to an Epileptick person every morning in Peony-water, and he will presently be cured.

15. A certain illustrious Lady testifies, that upon the most sure experiment of a certain Widow, the Falling-sickness is cured by a Powder made of Quails-Eggs. The Eggs are dried a little, so as they may be powdered. Half a drachm of it to 2 Scruples is given for a dose.

16. The

16. The Fat of a Rabber, killed by a violent death, melted, and 4 or 5 drops of it given in Water of Magpies, or Swallows, certainly gives help. ¶ This also is accounted a singular secret; The Gall of a black Whelp that sucks (they take for a Boy a Dog-whelp, for a Girl, a Bitch) and is strangled, given in some convenient liquour. By benefit of this a Son of the Duke of Buckingham's was cured. This is much in use in England.

17. The famous *Spiritus Vitrioli Antiepilepticus Hartmanni*; Take of the finest Hungarian Vitriol 4 pounds, add thereto of Urine of healthy Boys, new made, 8 pounds; Digest them for some time in a close Vessel in *Balneo Mariae*: Afterwards in the same distill a two-fold Phlegm, the first of which is an excellent Paregorick for Gout-Pains and others, to assuage them: the other is an excellent Ophthalmick, good for all diseases in the Eyes. Put the *Caput mortuum* powdered into a strong earthen Retort, in an open fire, yet at first but very gentle, and drive it over into a large Receiver; while the Spirits come over thick, there flows out a most pretious Liquour, of a Sulphureous smell, and something austere taste, which being rectified once and again by retort, and kept in a Glass well stoppt, perfectly cures all Fits in Children. A Scruple of this may be mixt with Water of Pœony, and Linden-tree-flowers, of each 1 ounce, and kept for use. Give half a spoonfull of this said mixture in the Fit, the contracted and convulse parts being first reduced, and a little after, their senses being recollected, they will come to themselves, which, as soon as you observe, give them a little more, and so a third time. But if the Fit should come again, as it often does, repeat the same process thrice, and never fear, but at the second time, this disease, so familiar to Children and Infants, may be utterly and radically taken away; especially if some comforters of the brain be used afterwards, such as are Magistery of Pearl, Coral, Man's Skull, and our Antiepileptic Lozenges. The famous *Hofman* likewise highly commends this.

18. There is an admirable Water distilled off Daffodil-flowers, which is a present remedy for the Epilepsie, if the Nape of the Neck and the whole Head be washed with it hot; but the Oil is much more effectual, which is drawn off the Flowers with the Water, by Chymical Artifice.

19. For Fits of the Mother, let Issues be made in the Legs, which remedy I have ever so much valued, and it hath succeeded so happily, that I have freed several Women thereby from most grievous accidents, and such as would give way to no other remedies.

20. How black Hellebore cures the Epilepsie; Take green Roots of black Hellebore, extract them with Spirit of Wine, draw it off, that the Essence may remain; If Milletoe, Pellitory of Spain, and Seeds of Pœony be added, it is more effectual.

21. *Montagnana's* Electuary excels all others in Efficacy, by benefit whereof many Epileptic persons have been cured; Take of the Roots of Male-Pœony, Cassidony, *Cistus*, each 10 drachms, Agarick 5 ounces, Pellitory of Spain, Caroway, Dill-seed, *Asa fatida*, *Aristolochia rotunda*, each 2 drachms and an half, juice of Squills, and the best Honey, each 1 pound and 2 ounces. Let the Squill and Honey be boiled over the fire to a consistency, then add the Powders, and make an Electuary. The dose is 2, 3, or 4 drachms, continuing to take it for 20 or 30 days.

Epiphora, or involuntary Tears.

The Contents.

We must not use things to stop the Tears, before we Purge the Head. I.

Collyries must want all asperity. II.

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Where a Seton must be fixt? V.

By the use of Oil of Vitriol one turned into a Cancerous Encanthis. VI.

Medicines.

I. WE must not use stopping Medicines, while there is a great and plentiful flux of humours; for then the abundance of humour, being intercepted by virtue of the Medicine, and stuffed as it were, it either, through its acrimony, causes greater pain, or exulceration. They must therefore be used, when either the humour is in a great measure evacuated, or the Flux of it is not great; otherwise they will doe what *Galen* 4. *met. 10. 11.* writes, *Washt Pompholyx, as also Spodium and Starch may both moderately dry up the humours, and also hinder the superfluous moisture, which is contained in the Veins, from being evacuated through the tunicles.*

II. Collyries must have no roughness in them; for things that are of this nature, although they be ground never so finely, cannot lose their nature, for they are never diluted like a Juice, but when they are even brought to their highest fineness, they must of necessity continue a kind of Powder, which as it were pierce the parts of the Eyes, and raise a more troublesome Epiphora, if they be used at the beginning. But when one has been vexed several days, and there has been a perseverance of the humour, and the Phlegm is rendered more glutinous by the heat of the Eyes, then Collyries of metallick things will doe good, for the Eyes will then bear them more easily, so they be void of exulceration.

III. In a stubborn Disease a Vesicatory applied to the forehead does good. *Forestus, obs. 11. l. 11.* tells of an old Woman, whose Eyes were bleared, weeping, full of water, painfull and itching, and was cured onely by application of a Vesicatory made of *Spanish Flies*, Leven and Honey. I had a Matron of about sixty under cure, who had had sore Eyes for six months, and when no Remedies would doe good, she was cured in twenty four hours, by applying *Schroderus* his chephalick Plaster to her Forehead: But she would not abstain from Wine through the whole course of her Disease.

IV. *Fernelius* derives the original of the Flux of Tears from the Forehead and Crown of the Head, in which he reckons the humour is gathered without the Skull, and under the Skin, which he will have to fall from the *Pericranium* upon the adhering Membrane, and so break out at the Eyes from without. But we must believe, that the Flux of the Eyes often derives its original from within, which *Paulus* has expressed; and *Rhazes* says, that this Flux may easily be cured, if it be fed by the outer Veins, but very difficultly, if the Tears come by the inner Veins.

V. In Defluxions and Weepings of the Eyes, all men agree, there is no Remedy more powerfull than a Seton in the Neck. Now *Hildanus* would have it made between the second and third, or even between the fourth and fifth *Vertebra* of the Neck. I think, the custome of *Aquapendent* and the *Italians* should be followed, who make it between the second and first *Vertebra*. For that which is made low-

Frid. Hofmannus.

Joh. Hartmannus comment. in Crollium.

Pet. Laurent. bergius.

Lud. Mercatus.

Paracelsus.

F. Iverius.

Rubeus in Celsum.

Heurotus.

Plempius.

er puts one to pain, because of the rubbing upon it by the Band and the Doublet:

VI. One upon the unseasonable stopping of a lachrymal Flux by the Oil of Vitriol, had so luxuriant a Gland upon the corner of his Eye next his Nose, that the excrescence of it did not onely cover his whole Cheek, but it degenerated also into a most pernicious *Carcinoma*, which a Chirurgion tried indeed to take hold on by a thred, and to cut it off conveniently with a Knife; but then the tumour had acquired that malignity, that it could scarce be touched, but it would immediately gush out with Blood, and therefore there was a necessity onely to use Lenients, by which the destruction of the Patient was deferred, rather than removed. Let them therefore consider, that so frequently use sharp Medicines, how easily an error may be committed, which by no Art can ever after be rectified.

Tulpius,
obs. l. 1.
c. 29.

Medicines especially made use of by eminent Physicians.

1. In Weeping, the Juice of Grasse of *Parnassus* squeezed out of the green herb is very good, as likewise the distilled water of *Tormentil*.
Crato.
2. Onely the Juice of *Pomegranates* boiled half away cures hot Tears.
Forestus.
3. Some commend a piece of raw Veal, well beaten, with tearing it, which they steep in Rose-water in a stone vessel, often pouring on fresh water, and they apply this Flesh to the Eyes, as the party goes to bed.
Franc. Osw. Gremis.
4. Take of Rose-water 2 ounces and an half, prepared Tutty 1 drachm, *Saccharum Saturni*, *Lapis Calaminaris*, each 1 scruple; mix them. Drop it into the Eyes.
Phil. Grullin-gius.
5. This Powder is very excellent; Take of burnt Hearts horn, twice wash in Rose-water, *Guaiacum*, *Cistus*, red Coral, Antimony, each equal parts; Musk, the fourth of one of those parts. Make a very fine Powder, which we may use, and with Wine make a Collyry. ¶ Also a Sponge wet in water, wherein the greater Pine-nuts bruised have been boiled, is very good, if the face be wash therewith.
Joh. Manardus.
6. A piece of white Vitriol dissolved in such a quantity of water, as the Eyes may bear, may be used with success. ¶ This Ointment is accounted singular for an *Epiphora*; Take of Verdigrise 12 grains, Camphire 1 drachm, prepared Tutty half an ounce, fresh Butter, which must be melted with Rose-water, and boiled a little, 6 drachms: Mix them; make an Unguent; put a piece about as big as a Pease into the greater corner of the Eye, and let the Eye-lids be lightly anointed.
Platerus.
7. In this Disease, especially if it arise from a cold humour, Water of Golden-rod, wherein burning Frankincense has been extinguished, is commended.
Sennertus.
8. This Powder wonderfully restrains Tears; Take the Shell of Citrine Myrobalans, infuse them in Rose-water for two days, dry them, and powder them; infuse them again three or four times in Rose-water. Keep it. ¶ Take dried Rue, boil it in Honey and Vinegar, strain it through a linen Cloth, when it is strained, anoint the Eyes with it, it will most certainly restrain Tears. ¶ This is a singular Remedy; Burn some Frankincense, and extinguish it often in Rose-water; Drop it into the Eyes.
Joh. Stahlke-rus.
9. This is a most experienced thing; Wash the Eyes three or four times a-day with Water wherein Gold smiths quench their Gold and Silver, or their Tongs: This will be better, if a little Frankincense, Mastick, Aloes and Litharge, be first boiled in it. ¶ And this is an admirable thing; Take of Juice of Fenil, *Pomegranate*, Sorrel, *Celandine* purified, Honey, each 1 ounce,

Beat them together in a Brass vessel, and let them stand in dung for 2 days; *Lapis Calaminaris* and Antimony each half an ounce may be added. Make a Collyry.

Erysipelas, or, St. Anthony's-Fire.

The Contents.

Respect must be had to the malignant quality joined with it. I.
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Purging is convenient onely towards the end. III.
We must use topical Medicines with caution. IV.
It refuses Suppuraters in soft parts. V.
Sleep must be avoided, if it seize the face. VI.
When Coriander is proper. VII.
An experienced Topick. VIII.
Leeches good in an ulcerous one. IX.
An ulcerous one in the Leg cured by anointing it with Spirit of Vitriol. X.
The Cure of the Pustules by pricking. XI.
One that came often in the Face, cured by an Issue in the Arm. XII.
One anointed with Oil caused a Gangrene. XIII.
The Cure of an exulcerated one. XIV.
How Frog spawn water may be used? XV.
Medicines.

I. IT is commonly believed it has its rise from yellow Choler; but some of the Moderns rather derive it from thin blood: for, 1. The Colour is a token rather of blood than bile, which is red, when it ought to be pale or yellow, as is manifest in the Jaundice. 2. Although the Colour be vehement enough, yet it is not so sharp, as in Diseases arising from yellow Choler, wherefore it is not so frequently exulcerated, as Ring-worms and other Tumours caused by bile; and when it is exulcerated, it is not so much from its own nature, as from the alteration of it. 3. They are seldom obnoxious to it that are of a hot and dry constitution, lean, brown or black, which is most suitable to breed yellow Choler; but they rather that are sanguine, fat, fleshy and red. 4. The fleshy parts, the Thighs, Legs, Face, Neck, Breasts, and the like, are oftner affected than others. 5. This Disease comes most between thirty and forty years of age, about which time there is most blood in the body. But yet the cause must not be ascribed simply to fulness, but rather to a depraved and peculiar quality of the blood, which proceeds from the putrefaction and corruption of its thinner part: for Nature being stimulated by that malignant quality, drives the vitious humour to the outside of the body. A sign whereof is, that this Disease seizes one like the Pestilence, so that they, who never had it before, think they are taken with the Plague, till the Disease shew it self in some part. Hence it is the common practice, when the Paroxysm comes, and the Rose appears, to take Medicines which help Nature's motion, and drive the matter from the inner parts to the outer, as Treacle, Mithridate, Water or Rob of Elder. These Medicines taken in the beginning are approved on, where plenty of humours is not urgent, otherwise it is safer to remove the antecedent cause.

II. *Celsus* especially commends Blood-letting, whom *Paulus*, lib. 4. follows. *Galen*, 14. meth. & 2. ad *Glaucnem* seems averse to it. But I follow Reason rather than Authority: for it is an acute Disease, which must quickly be opposed, a kind of Inflammation, from the thinner Blood, or at least its *Ichor*, and the hottest of it; But in such a Heat who dare omit Bleeding, or fly to other Remedies, and neglect it, since it draws from the part

Sennertus.

part where the fluxion is, evacuates, helps transpiration, and readily draws out the bilious blood, as it lies in the Veins. If a sincere *Erysipelas* occur, arising from Bile alone, such as *Galen* supposes, and if a bilious Cacochymie redound in the habit of body, then Bleeding may be let alone, for fear of the ebullition of cholerick humours.

III. Although *Galen*, 13. m. m. seem to approve of Purging; yet we must proceed to it with great caution, and not till the declension, lest the humours, being stirred, run to the part affected: Wherefore, after the seventh day, Electuary of Juice of Roses with *Cassa* may be given, and after it some pounds of Whey.

IV. The Ancients, and most Writers of Chirurgery do very much use Coolers, even Water itself, the coldest of all; yea, they also mix with them Astringents and Stupifiers, as Henbane, Mandrake, Opium, Hemlock. But the Modern reprehend this common Cure, not without the suffrage of reason and experience: for since the sharp matter exciting the Rose is not without malignity, if its going out be hindered by these very cooling, binding and repellent things; it returns inwards, and seizes the nobler and inner parts, to the hazard of life, hence a Phrenzy comes from an *Erysipelas* in the Head struck in. Finally, by these things the matter is shut up in the part affected, whence putrefaction and suppuration, which is often attended by a Gangrene. Which thing since it often happens from the cure of the *Greeks* and *Arabians*, they admonish us, that the part may be so far cooled, as that the heat may remit, and the Patient confels himself not to feel so great a heat, with the turning of the red colour into a livid: But it may easily fall out, that before sufficient caution can be used in this case, such dangers may already be at hand. Wherefore the case seems not to differ much from that of Burns: For if a burnt part be dipt in cold water, it does but inclose the heat, with danger of pain and making it worse. Hot things are more properly applied, which make the skin lax, open the pores, and dissolve the ferous humours, that would break out into pustules. The intemperature of the part is removed after the same manner in both cases, not so much by opposing it with a contrary, as by taking away the cause. ¶ In this case the use of moist things is prohibited; for they presently cool actually, although they may heat potentially; and therefore they obtain the force of a repellent. Therefore dry and digesting fomentations are best. Hence it is, that if a Patient, through carelessness, wash in the beginning of an *Erysipelas*, not knowing the Disease, it will be exasperated, swelled, and the pain doubled. ¶ We must have a care of things that are unctuous and have an emplastick virtue, especially of Narcoticks; for the sharp vapours exhale, which if they be kept in, sometimes corrupt the part. ¶ It is a custome among our country people, if they be taken with an *Erysipelas*, to anoint the part affected with Oil of Bayes, mixt with a little Quicksilver, with which Medicine they prolong the Disease; for while the Oil makes lax the Skin, the *Erysipelas* spreads farther and farther, so that you may see it overrun the whole Body on a sudden, except you prevent the mischief thus, i.e. unless you apply all round it a linen cloth wet in warm water, which may defend the other parts. If the humours that stick in the flesh be plainly extravasated, they cannot flow for their thickness: let the Physician therefore make them fluid with hot Medicines. So an *Erysipelas* in the beginning is taken away by applying Spirit of Wine.

V. I have seen an *Erysipelas* in the right cheek, that was treated with suppurating Emplasticks, turn to a Gangrene. Again, I saw a Chirurgeon with such Emplasticks who was taken with an *Erysipelas* in ano. The reason is, 1. Because the Cheeks, Breasts, Nose, &c. because of their softness, are easily de-

prived of their innate heat. When therefore strength is good and the humours are hot, let Digesters, not Suppuraters, be made use of.

VI. This is a rule concerning Sleep; When an *Erysipelas* is in the Legs or Thighs, moderate Sleep is good: But when it is in the Face, we must refrain from Sleep as much as may be.

VII. Green Coriander and Barley-flower applied is a very good Medicine, but not in the beginning, because it is hot, which its bitterness shews, although it partake of moisture.

VIII. By the use of *Linimentum simplex*, not yet rank and often changed, I have cured innumerable *Erysipelas*'s with success, not neglecting universals and inward coolers. In defect of this nothing is better than Oil of sweet Almonds nine times washt in a glass-bottle with Night-shade-water, with which cold anoint the place till the violent heat be diminished. Others commend *Balsamus Saturni* made with Linseed-oil, and often anointed with a Feather. This is the Description of *Linimentum simplex*. Take of Juice of Night-shade fresh made, Oil of Roses, each 20 ounces. Boil them to the consumption of the Juice. Strain it, and add to it Litharge of Gold, Ceruss, each 1 pound. Mix them; make an ointment according to art.

IX. A Leech did a melancholick Woman a great deal of good, who had an eating *Erysipelas* in her Leg: for it drew out of the Veins thereabout the hot and adust blood, which had all along supplied the stubborn Ulcer with matter: which being sucked out, the rest of the trouble was easily over, only by applying Bread soaked in Water.

X. The famous *Veslingius* cured a certain person of an ulcerated *Erysipelas* in his Leg, when he had first purged the Body, by touching it sometimes with a Feather dipt in Spirit of Vitriol. He said, that these sharp chymical Liquours, were therefore applied to malignant and spreading Ulcers, that the corroding humours may after a manner be mitigated, and their violence broken, after the example of Salt of Tartar, and Spirit of Vitriol, both which were very sharp, and by their mutual acting one upon the other, their mixture produces a far more gentle Medicine.

XI. In the Blisters of an *Erysipelas*, which by force of sharp and hot ichorous Juices use to break out, *Fallopins* advises to prick them in the beginning, adding this moreover, that the place subject to the Fluxion should be prickt. Which operation also pleases me; yet I had rather doe it with a golden or silver Needle. But you must also know this, that they must not be prickt slightly, but also clipt with Scissers, that nothing of the Ichor may be left, which being kept in a Bladder might by its contact spoil the part.

XII. I knew a man about thirty five years old, of the Senatory order, whose Face was often invaded with bilious blood, and then was continually disfigured with an oedematous swelling, the thinner parts of the humour being dissolved. By the advice of Physicians several remedies were tried, altering Broths, Whey, Waters; but all in vain. I advised an Issue in the Arm, (it was made in the right Leg, but to no purpose,) which by the persuation of the Chirurgeon (whose Wife had found the benefit of it in the like case) he admitted. And he has not been troubled with this Disease ever since the year 1673. to 1679. his Face falling, and all signs of the Oedema being gone.

XIII. A Countrey fellow had an inflammatory *Erysipelas* in his left Hand, he anointed his Hand and Arm for some days with Oil of Roses; upon which his Pain, Inflammation, &c. grew worse, so that his Hand was all over gangrened: From whence it is clear, that Oil is a great enemy to Inflammations, as *Galen* 15. de simpl. intimates. ¶ In the year 1668. a Butcher's Wife of Geneva, called *Bourdillat*, anointed her Face, that had an *Erysipelas*

Sanctorius.

Crato.

Fonsec.

Scultetus.

N. Tulpius.

Veslingius.

Severinus.

In H. L. L.

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in it, with the same Oil, then she had a most filthy thick scab, as white as milk, which almost caused a Gangrene. Therefore *Fortis, Consult. 95. cent. 1.* bids us wholly abstain from oily and fat things; because being heated by the heat of the part, they may inflame it farther.

XIV. I happily cured an ulcerated Erysipelas by the method prescribed of *Rulandus, cent. 1. cur. 43.* One about sixty three years old was taken with an ulcerated Erysipelas in his feet, with great pain and swelling. 1. I thus purged the Body: Take of Syrup of Roses, *Mont. 1 ounce*, extract of Spurge half a drachm, Pectoral Decoction 1 ounce and an half. Mix them. A wash for the feet: Take of Roses 4 handfulls, Plantain 3 handfulls, let them boil a little in a sufficient quantity of water. When you take out your feet, and have wiped and dried them with a soft Towel, anoint them twice every day with the following Ointment. Take of Litharge 3 ounces, *Unguentum Populeon*, wash Cerufs, *Infrigidans Galeni*, each half an ounce, oil of Roses complete, 1 ounce. Let them all be mixt in a mortar, till it be made an Unguent. Water-Cresses is a singular thing in an Erysipelas.

Hartman.

XV. It is usual with some men to quench St. Anthony's fire with Frog spawn-water, but often with ill success: for it is too cold, because it has in it a Mercury joined with a certain saturnine property. Therefore indeed it is repelling; but a manifest cause of a Gangrene, and other grievous symptomes. And it is best to mix with a decoction of Myrrh and *Olibanum* in Wine and Vinegar.

Idem.

Medicines especially made use of by eminent Physicians.

1. This is a most certain remedy; Let a linen cloth be dipt in a Virgin's Menstruum, dry it, and when there is occasion, cut a piece of it off, and steep it in Vinegar of Roses, to draw out the Tincture, apply it warm, and repeat it several times. It presently draws out the heat. ¶ I have experienced this in several: Take of Rob of Elder 1 ounce, *Saccharum Saturni* 1 drachm; mix them well, spread it on a cloth, and apply it, in a few hours it draws out the heat. ¶ For an Erysipelas in the head Cinnabar of Antimony is very good, and nothing surer, it cures immediately. The dose is 15 or 16 grains in some proper liquor. Let it be given twice or thrice, it is an excellent Diaphoretick.

Joh. Agricola.

2. Butter of Saturn is sufficient to cure an Erysipelas, if it be applied cold outwardly. And it is thus made; Take some distilled Vinegar, in which let a piece of Litharge or red Lead boil 2 hours, stirring it with a stick. After the Vinegar is settled and clear, take a little of it, and shake it together with Oil of Violets, till it turn into the consistency of a very white butter, add often a little of the said Vinegar, impregnated with the Salt of the Litharge or red Lead, and some Oil of Violets, always shaking it, till you have a sufficient quantity. Keep it for use.

Pet. Joh. Faber.

3. Take as much scabious water as you please, dissolve a little Venice Soap in it, boil it a little. Dip a linen cloth in it, strain it out, and dry it gently upon a furnace, when it is dry, apply it, and repeat it several times.

Phil. Grulingius.

4. Some chymical Sudorificks are good for an Erysipelas. Some lixivial Scaps must be applied to the part affected, which imbibe the acidity, such as are linen cloths often wet in a lie of Beech ashes, shaken together with the white of an Egg and Camphire, and dried in the shade.

Frid. Hofmannus.

5. Wrap a Nutmeg in a wet Linen, or in Hemp, roast it in hot ashes; mix likewise with it as much Columbine Seed, wrapt in a wet cloth and roasted in the like manner. Make a powder. Drink it in small Wine or Scabious water, whereby the moveable turgent humour in the veins is more easily expelled.

Gr. Horstius.

6. There is almost nothing better for an Erysipelas, than that the Patient immediately take a few drops of Oil of Amber in some Elder-flower water, and sweat. It preserves a man also from this evil, if he use this Medicine once every month.

Conrad.

Kunrad.

7. There is scarce a more present Remedy than Pap, made of the bulb, leaves and flowers of the Daffodil, for driving away the inveterate pains of an Erysipelas.

Pet. Lau-

rembergius.

8. I infused some fresh Elder flowers in Whey, and when I had boiled them a convenient time, I strained it out, and drank a draught of it morning and evening for 3 or 4 days; and from that time to this I have been free from an Erysipelas.

Simon Pauli.

9. Linen cloths dipt in ones own Urine, strained out, and when they are dry, applied, draw out the heat, and cure the disease. ¶ Cow's dung, or Pigeon's dung, mixt with Oil and applied, is good.

J. Dav. Ru-

landus.

10. Sheep's dung boiled in Vinegar, and applied as a Cataplasm, is good, and when it itches, ones own water applied, kills it. ¶ Spirit of Wine is in this case highly commended, which does so difficult, that if the hurt part be presently chafed with it, it stops the swelling and inflammation, and also mitigates the pain by its narcotick virtue.

Exanthemata, or, Spots, Wheals or Pustules.

The Contents.

Sometimes we may purge and let blood. I.

When purging is proper? II.

Coming without a Fever cured by the help of diet only. III.

I. *Galien 2. in 6. Epid. 30.* considering Simon's history, who had broad Pustules appear, said that purging and bleeding were proper in this case: Not indeed to evacuate the matter transmitted to the Skin; but to take away the superfluity of humour residing in the venous kind, before the matter transmitted to the Skin, is evacuated by topical Medicines.

Sylvaticus.

II. It is no small difficulty to determine, whether in Diseases, wherein something breaks out in the Skin, we may use a purging Medicine, at the first breaking out, and in the beginning of the motion, or at any time else? Some being affrighted with the plenty of bad humours in malignant Fevers, do rashly run to purging, when spots begin to appear. For when they find that taking away blood is not sufficient, but that the accidents do yet increase, (and often because blood enough is not let, which would doe more good) they fall on purging, that they may be thought to oppose great Remedies to great Diseases: thinking they may avoid so urgent a danger, little regarding the retrocess of the deadly matter to the bowels, and expecting greater benefit from purging, that is, when the load of humours is taken away, which will not tarry for coction. These men are seduced by *Galien's* judgment, who denied not, that in the cure of Simon's Pustules we might use a Purge. That the truth may appear, we must know, there is a threefold difference of Efflorescences in the skin. For some are caused, while Nature by the malice of the humours is much irritated, and before the time; which being compelled, and taking care that the humours fall not on some principal part, changing her accustomed order, and before coction, drives the deadly humour from her self; Of this rank are the Small-pox, Measles, Erysipelas and Spots in malignant Fevers. Again, some are indeed made by Nature driving them out, but then the matter is more kindly, and such as causes

causes not a Fever inwardly: of which nature are pocky Pustules, and the scabby Eminences of *Simon* and all others, which break out at the Skin, while the faculty of the Veins unburthens it self. There are others also, that bud out at the skin, from some fault in the flesh or the third Region, through the depraved nourishment, as in the Leprosie, several sorts of Scab and Itch. From which difference it follows, that what is driven to the Skin, is either caused by the pernicious condition of the humour, which causes a deadly Fever; or by reason of abundance of ill humour, unfit for nourishment, whether it be in the veins or in the flesh. Also that which breaks through the Skin, is either fastened in the flesh and skin, and so causes Pustules and Tumours; or it onely defaces the skin with its colour and thinness, and raises a very diseased affection in the skin, while it prevents a greater in the bowels. Which things premised, it is resolved, that a purge must not be given in any defecation of the skin, as it begins, and in the very breaking of it out, whether the matter be malignant or not. And this should be observed especially in spots of malignant Fevers, Small-pox and Measles, nor yet after the complete time of apparition of the Small-pox and Measles. But sometimes upon the score of some most urgent danger, in Malignant-fevers (because while they are yet appearing, there is abundance of pernicious humour, and the Fever encreases,) after the violence of the eruption, and while the motion is continued outward by nature, sometimes it may be lawful to purge by friction and cupping; although this must be done but seldom, and with premeditation. But in other spots of the skin, which degenerate into the Small-pox and Measles, we must neither purge in the beginning, nor after the time of eruption is complete, nor at any time: because the humours, that caused the Fever, are they which degenerate into the Small-pox or Measles, and for that Reason the Fever presently ceases, which is discoloured, though there follow another from suppuration: In an *Erysipelas* very slowly, because in these Diseases the matter is very moveable. But if that which has appeared in the skin (whether *Erysipelas*, Measles, Small-pox, or Malignant-spots) do suddenly fall back, disappear, and turn inwards, we must purge forthwith, before it fall on any principal part, as the manner is in turgent humours. But in some

scabious eruptions, such as *Hippocrates* observed in *Simon*, and in others of the same stamp because they are settled in the flesh and skin, and come of a thick matter, and are moved slowly, you may give a Purge when you think fit; yet not in the beginning and very height of the eruption. For we must permit Nature to finish the motion she has begun, and afterwards we may purge at any time; because what remains within, as it breeds dayly more and more, so also it desires to be evacuated: for the matter is neither all together, nor expelled, but remains to be expelled, without any Inflammation or Fever, which can require coction, or it must be expelled because of urgency; yet by no means in the violence of its motion. For it is determined among the Prudent, to permit as yet the violence of the irritation and commotion in erring Nature, before we stop it, in evacuations which we must of necessity stop: Nor must we do it in those evacuations, which Nature moves from the principal parts to the ignoble, for the better, because of the deadly humour. In which matter the wiser, guided by reason and experience, fear to divert Nature from the work of expulsion, she has begun, by giving a Purge; which motion it were a thousand times safer to help by cupping, scarifying, &c. Because Nature would sink very much, and be wearied in the contest, by the violence which is done her by the Medicine drawing to the Bowels, contrary to her own motion outwards. Besides, upon its turning back we must fear it will settle on some principal part: for the turgescency is not more mortal, than the foresaid retrocess inwards and from the skin, contrary to the motion of Nature from within outwards. Nor also is it in the power of Medicine necessarily to force the humour, when it is moved, to the Guts.

II. A Nun, without any precedent Fever, or decay of strength, or any other usual signs appearing, was suddenly seized with Pustules all her body over, and she was then sensible of no other ail besides. She recovered onely by Diet without the help of Physick. I judged, because the Disease came in the wane of the Moon, that Nature helped by the monthly motion, rather drove the excrements, which were few, to the circumference; as if she had endeavoured insensible transpiration: Since the Pustules appeared not all red, as in others, but were somewhat black and greenish.

Mercatus.

Rumiletus.

X A

A GUIDE TO The Practical Physician.

BOOK VI.

Of Diseases beginning with the Letter F.

Febris in genere, or, A Fever in general.

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humours in his body. VI.
They that are sick of a Fever must not always be kept in bed.
VII.
It is not requisite that every Fever should end in sweat. VIII,
IX.*

I. **I** Am of the opinion that old Writers knew not the kinds and differences of all Fevers. I will propound a fourth, found out by me, and hitherto observed by no man. And it is an uniform, continual Fever, without any exacerbation, following, immoderate heat of the Breast and Lungs, without putrefaction. And this heat seizes the Lungs for want of breathing in Air, through the fault of narrow Lungs: Which indeed being immoderately heated, cause a Fever for two reasons, in the Heart, and then in the whole Body. Both because they communicate the conceived heat immediately to the Heart, and because they so heat the inspired Air, how cold soever it be, that it is in no wise sufficient to cool the heart, according to Nature's appointment. Hence arises a continual Fever, which can neither be called properly an *Ephemera*, nor a *Putrid*, nor a *Hætick* Fever. If any one will refer it to

a *Hætick* Fever, improperly so called, as arising from a principal part disaffected, he will not be far out, so he understand the manner of its generation, not as yet observed at all by others. I have more than once observed, that they who were taken with this fever, laboured of an *Asthma*, not at intervals, but continually. ¶ *Sennertus* besides *Ephemera*'s, continual, primary or symptomatick, and intermittent, admits also of a certain kind, which proceeds from Worms, Milk corrupted upon Childrens Stomachs, concrete, extravasated blood putrefying, such as sometimes attends a *Dropsie*: And I add, such a Fever as arises from Phlegm swallowed down, and putrefying on the Stomach. Such Fevers proceed slowly, because while the matter is far distant from the Heart, they send slower and fewer fumes to it, and counterfeit *Hætick* Fevers. Höferus.

II. Some Fevers as well continual as intermittent, are observed in practice to be in a manner doubtful, which we can neither certainly refer to *Ephemera*'s, nor to any one kind of putrid Fevers: For some run out sometimes beyond the third day, and sometimes are in the same day often exasperated, and that either while the meat is digesting, or towards evening, gentle they are indeed, and such as that the Patient scarce thinks himself thereof; yet they are apparent by the celerity and frequency of Pulse, tiredomness, heaviness and wasting of Body, and sometimes by more grievous symptoms. And some of them being brought to a pure intermission, without any sense of shivering, gently, as I said, they do return, either while concoction is performing, or towards evening, or on any occasion: Some of this sort are caused by a violent Itch, Scab, Felons, by outward Boils, and sharp Distillations: Some also are caused by invincible crudity, or bile effervescent without putrefaction, or some half disordered quality of the humours, which possesses the first or any other Region of the Body: For this
their

their vitious quality is the middle way to putrefaction, at which the Disease for the most part stops. Wherefore I remove all this sort of Fevers either by a thin and cooling Diet, under which Nature alone might amend the fault in the quality, Or, if Diet did little good, I moreover accommodated bleeding or purging to it, which were quickly attended by a recovery.

Fernelius.

III. Our modern Physicians proceed to let blood in any Disease, so there be but a Fever, contrary to the mind of Hippocrates, who so much feared bleeding because of a Fever, that for its sake he often thought fit to abstain from letting of blood. So Sect. 3. Coac. 79. Letting of blood is bad for pains lying about the side, in Fevers. And 2 Epid. Sect. 2. v. 10. If there be an Ulcer, bleed in the inner veins, so he be not in a Fever. And a little after. v. 18. Whoever are taken speechless on a sudden, if they have not a Fever, let them bleed. Coac. Sect. 2. v. 72. Whoever are taken on a sudden with a pain about the Hypochondria and the Heart, &c. Bleeding cures them. The reason depends on this, because a Fever does not only argue there is choler, seeing Hippocrates, l. de Nat. Hum. v. 272. thought that all Fevers, Diaries excepted, have their rise from choler; but it shews that the choler is in a ferment. Wherefore in this case bleeding does much harm; both on the account of the sign, because it shews bile is predominant; and in a ferment; and upon account of the cause, in as much as the humours, made thin by Blood-letting, are so far attenuated by the febrile heat, that the whole blood almost is turned into bilious juice: for Bile is nothing else but attenuated Blood immoderately boiled or inflamed by heat. And this is the reason, why they who have bled immoderately, are subject to cholerick Fevers; as Hippocrates observes l. 2. de Morb. Mulier. All which things the prudent old Man taking notice of, did so far suspect Blood-letting in putrid Fevers (these he calls Fevers from Bile) that for the cure of them he nowhere admits it. Which Doctrine of Hippocrates Galen understood otherwise, when he settled this Axiom, That it is most wholesome to let blood in every putrid Fever; whom the Moderns follow, who let blood in every Disease, as often as there is a Fever, as though it were the principal Indicant of Blood-letting.

Martianus.

IV. The cause of the febrile ferment, which is elevated from divers Subjects, breeds the distinction of Fevers. For in intermittents the occasional cause resides in the first ways, that is, in the Stomach, Guts, and other adjacent parts. The cause of burning Fevers properly so called, is contained in the mass of Blood it self, which is either corrupted from without, and made malignant and poisonous, or it raises an intestine War. The subject of infection or the mine of Continual periodick Fevers, is either in the Mesentery, Pancreas, or in some other Organs designed for elaboration and defecation of the blood. And in removing all these, our chief care must be directed to that which is most urgent, namely, to appease and hinder the ebullition of the blood, which causes the fever fit. A thing nevertheless, which will immediately be performed, neither by bleeding nor purging, that is by diminution of strength, but by specific Febrifuges, Preparers of the febrile matter, Diaphoreticks and Diureticks.

Frid. Hoffmannus.

V. If a Fever come upon a Lethargy, the Lethargy is cured. But if a Fever come not of it self we may cause it by Art, by anointing the Pulses with Oil made of Beetles, called *Lucanici*, as you make the Oil of Scorpions. For so upon certain experience, a Fever is raised, resembling an *Ephemera*, which disappears presently the next day.

Hæcærus.

VI. Seeing the specific differences of Epidemick Diseases, namely of Fevers, rely upon the secret constitution of the Years, they labour in vain, whoever would draw the reasons of the difference of Fevers from a morbidick cause gathered in Man's Bo-

dy; for it is as clear as can be, that any man, be he never so well in health, if he go to some certain places where a Fever rages, shall be taken sick in a few days. And it is scarce credible, that any manifest alteration can be made by the Air, in so short a time, upon the humours in the aforesaid man. Nor is it less difficult to accommodate general rules for conquering these Fevers, and we may not fix any certain bounds, how far to go and no farther, and where to fix. Therefore in so obscure an affair, I think nothing better, when new Fevers are first abroad, than to pause a little, and to proceed, to the great Remedies especially, with a suspense pace and slowly: In the mean time diligently to observe their nature and way, and with what sort of Remedies the sick are benefited or hurt, that as soon as may be we put away these, and use them.

Sydenham.

VII. Manifold experience ascertains me, that it uses to fare very well with the sick, in all Fevers, that is, which participate of high inflammation, if they be not always imprisoned in their bed, but keep up every day, at least some hours; or if their weakness forbid that, let them put on their clothes, and lie upon the bed, with their Head high. But how much good soever it doe the sick, we must nevertheless take notice, that if they keep longer up from their bed than they should, at one time, they may especially in the declension of the Disease, easily fall into running pains, which may end in a Rheumatism: And sometimes also they may be overrun with the Jaundice. Which things if they happen to any man, he must be confined to his Bed, that the pores of his Skin being open, such particles may commodiously be evaporated, which give fewel to either Evil: But this must be only for a day or two, and not so as to sweat. But such Accidents are very rare, nor do they ever appear except in the declension of a Fever, at which time, when the Disease is now grown milder, you may with much more safety suffer him to keep his bed always, than either in the beginning, or in the State; yea, at this time it will conduce much to digest the febrile matter, which if the sick should be laid up in his bed sooner, would be more enraged and inflamed. For it is certain, the heat is increased by what is circumambient, and it must of necessity so be, if the sick keep himself continually in bed.

VIII. If any one do here object, that such a Method is not so expedient, in that it hinders evacuation by sweat, whereby the febrile matter then concocted, should wholly be thrown off. I answer, that he, who is of the contrary opinion, says nothing, unless he can first make it out by arguments, that this sort of evacuation is due to every Fever, which is not so easie to doe. For Experience, and not Reason, shews what sort of Fever should be cast out by Sweat, what by Purge, &c. Nay, we have reason to believe, that there are some sort of Fevers, which Nature throws off in a method peculiar to it self, without any visible evacuation, that is, by reducing the morbidick matter into the mass of blood, and by assimilating that to the blood which before was not so agreeable to it. Which reason I relying upon, have often in this sort of Fevers, as well as others, presently upon the first coming, and while all the Blood was not as yet infected, reduced the same into order, only by ordering Milk and Water for drink, and forbidding the eating of Flesh, or broth made of the same, allowing them in the mean time the use of their constant exercise, and the open Air, without making, so much as once, any evacuation at all.

IX. But if we grant, that Nature cannot conquer the Disease by any other method, than by sweat, must we not understand such sweats, as break out, when the Disease grows weak, and as flow from previous digestion, and not such, as being cast off in the first days of the Disease, proceed from the interrupted Oeconomy of Nature in a rage? Such

sweats, I think, are not to be promoted, but the tumult rather should be appeased, to which they owe their Original; and such sweats usually attend many sorts of Fevers, though not all. For neither am I ignorant, that some sorts of Fevers are of that nature, that in their declension they require this critical sweat. Such are the particular Paroxysms in intermittent Fevers; and also the great and most frequent Fever in Nature, depending upon that constitution, which especially conduces towards the production of Agues Epidemically. For in these, if any method be insisted on, which does not tend to this purpose, that the morbidick matter may first be digested, and then cast out by sweat, the Disease will be increased. Wherefore here no evacuations ought to have place, unless as they may be able to stop the violence of the Disease in the first days, when it seizes a man, lest the Patient sink under the Physicians care. Besides, the cause of a Pestilential Fever, since it is very thin and subtle, it may be carried off by sweat in the beginning of the Disease, experience every where concurring. But in these Fevers, in which by the ordinary duct of the symptoms, although they be left to their own secretion, we no where observe Nature usually to evacuate the morbidick matter already prepared in the determinate time, I know not whether he be not over rash, who thinks to doe any good on the Disease by provoking sweat, and restore the sick by that method alone, seeing as the old man teaches, *Where Nature is repugnant, all things are in vain.* And I think this usually happens in this particular Fever, whereof we treat, which, I am taught by manifold experience, may to my knowledge be driven away without sweat. And I know also, the Patient is brought into manifest danger of his Life oftentimes, while we without any urgent necessity importunately sollicit sweat, by the morbidick matter being carried up into the Head. Yet neither in this Fever, nor in any other, even of those which use not to end in a critical sweat, if by chance such a sweat come of it self, when the Disease is now diminished, which from the remission of all Symptoms, we reckon the effect of due concoction, will the most prudent Physician condemn it. But when it comes not out of it self, how can we certainly know, whether we kill not a man, when by regiment and hot cordials we endeavour to dispose the humours to such sweats? But however the case be here, I am abundantly satisfied, the Fever onely brings heat enough with it, which may suffice to prepare the febrile humour for coction, and that a more intense one than that need not be caused from without by a hot regiment.

Sydenham.

Febris putrida in genere, or, A putrid Fever in general.

The Contents.

We must consider the different seasons of the year, rather than the various constitutions of the Sick; where the nature of Autumnal Fevers is treated on. I.

We must have respect to the differences of one Year from another. II.

We must distinguish between the Infection and the Matter. III.

THe diversity in the cure of Fevers that arises from the different seasons of the same year, and also from the difference of one year from another deserves no less consideration, than what arises from the different temperaments of the sick. And truly among the principal reasons, why the cure of Fevers is so uncertain, and the endeavours even of learned men

succeed so ill, I think this should be reckoned for one; that Practitioners use to accommodate their observations, which they have made from the successful cure of one or more Fevers in this or that season of the year, to the cure of all Fevers, in any season, or any year; a thing which I look on altogether as dangerous, as if a Physician should not have respect to the different tempers of the sick peculiar to each, but should give the same Medicine promiscuously to all in the same Disease. First, that I may discourse of the varying methods of cure, which are accommodated to Fevers in the different seasons of the year, it must be considered, although other differences may be granted among Fevers upon other accounts, yet that they principally differ according to the subject matter, in which the febrile commotion is made; and that that matter has its difference according to the different disposition of the blood, as it is produced by this or that season of the year: for the febrile commotion, which happens in the Spring time, arises in the blood, when all the Spirits are brisk; but the Autumnal one, in the blood depauperated by the heat of the foregoing Summer, and by the virtue and effects of it. And as a Fever happens to invade the blood in reference to the nearness or distance of these two seasons, so the Disease participates more or less of the nature of the fermentation that belongs to this or that season. And what we observe in our practice, is agreeable to these things, namely, that all things else corresponding, Autumnal Fevers are more dangerous than others, and are accompanied with more dangerous symptoms, than Vernal ones, because the Spirits of the blood are more evaporated and spent in the Autumnal season, than in the Vernal; which is one reason, why evacuations, especially of blood (which is not onely the Vehicle of the Spirits, but the Storehouse) are so hurtfull in Autumn, though they life to doe good in the Spring. And may be from this degenerateness, which frequently happens to the blood in Autumnal Fevers, from the forementioned poverty of Spirits especially, a poisonous quality is often bred in the blood, which produces not onely the ill natured symptoms accompanying the Fever, but sometimes even the Fever it self: for Nature violently irritated by it, rises against it, nor does it begin this new Ebullition for any other end, than to cast out the said Malignity; wherefore it lies upon the Physician rather to resist this by help of Alexipharmacks, than to resist the Fever by evacuations and cooling medicines, which Nature seems to have set in Battel array, to conquer the Malignancy. We have a remarkable Instance to this purpose in the Plague, which if destitute of a Fever, is much more dangerous, than if it have one accompanying it; and truly every malignity, which seizes the blood, if it cannot of it self raise an Ebullition, or if it can, be hindered in doing it, does of necessity render the Disease either mortal or of long continuance; mortal indeed, when in its essence being contrary to Nature, it corrupts and destroys humane temper by an hidden property; and of long continuance, when, although of its own Nature and occult way of working, it be apt greatly to hurt the body, and by degrees to waste it, yet it has not the power to kill suddenly. In the mean time that some malignity, which otherwise by its pravity necessarily causes death, is sometimes safe, where there is an Ebullition of the Blood to cast it out, the Plague it self does sometimes testify. And where no such Ebullition is, to cast it out universally and every way, there for that reason the Disease is long, as appears in the Scurvey, Pox, &c. To return to the business, I have observed, that in all sorts of People sick of Autumnal Fevers, blood must be let but sparingly, and in Persons not grown, or past the flower of their age, not at all. It is dangerous to give cooling Medicines, unless the Fever be

be over high, and the Party young. Vomiting is very necessary, where there is a propensity to vomit. But in Vernal-fevers blood may be moderately let in all persons, and in People in their prime, plentifully. Clysters and cooling Medicines doe a great deal of good, when the Patient is young, and when the Fever is not declining, nor large bleeding preceded. Vomiting, where there is a propensity, is not absolutely necessary, but yet proper enough; nor does the omission of a Vomit plainly cause a looseness in the declension of a Fever. I never yet observed a hard Belly or swollen Feet follow Vernal-fevers; but both are very frequent after Autumnal ones, especially when blood has been let plentifully, if either the Patient were in his childhood, or had passed his prime.

Sydenham.

II. Secondly, that we may speak moreover of the difference that arises among Fevers, from the difference of some years from others, and farther, of the cure that belongs to them on that account; we must take notice, that the reason of this difference between the Fevers of one year and another, cannot be given always from manifest causes, since it often falls out, that one year is Epidemical as to Fever (not the Plague onely) not less, but in the ordinary malignity, where we cannot assign any reason from badness of food, nor from inferiour exhalations putrefying in the Air, nor from the inordinate and unequal alterations of the times and seasons, inclining to heat and moisture; but we are forced to confess this constitution is the product of a malignant and inexplicable destructiveness of the Air. Nor is it less difficult in this case to find any certain and determined way of cure, which may exactly answer to the difference of Fevers, depending on the various temper of the years. Nevertheless I shall not stick briefly to declare what things have offered themselves to our diligent observation. In Autumnal Fevers therefore, which in an Epidemick constitution, and in a year, wherein Diseases peculiar to Autumn (that is, Quartanes, and malignant Tertians) do appear sooner than ordinary, suppose in June, or beginning of July, Bleeding is very hazardous. And what I intimated of Autumn (concerning which I was now speaking) Experience testified it to be true; for for the most part of that season, it was found mortal, especially in the beginning of Autumn, unless the Patients were in their prime, and were able in some measure to bear the loss of blood, in which case indeed, although it caused not death; yet they found the Disease long and very dangerous, and attended with most cruel symptoms. Certainly, as I remember, the like danger did not offer it self from other evacuations, and especially from those that were made by Vomit, which for the most part, both in that and other, the like malignant constitutions, had an issue good enough. But now ever these things be, I have long since learned, that the Physician must give his advice, as the present occasion shall require, that is, he must accommodate the scene, variegated with so many differences, as much as may be conveniently, by changing his practice now and then, or, altering it a little, according to the temper of the season, and the Patients. In the mean time I can affirm this, that the general method already laid down (as far as I could hitherto gather from attentive observation) does in it self well enough comprehend the cure of all Fevers, although I am not ignorant, that now and then the different seasons of the year, or the difference of the years themselves, do hinder, that we cannot fix any certain limits, whither we may go, and no farther. It is better certainly, when Fevers begin to rage, diligently to observe their violence and way, and by what sort of remedies the sick are helped or hurt, that rejecting these, we may use the former. And if that be done, I think in very deed, when we have made some trial of it, that it will be found, the way of cure hitherto described, does

not much miss the mark: Certainly, as for my self, I think very seldom to deviate from it, even in malignant Cases, for which it is very proper, because it keeps up due fermentation, (Nature's best Instrument,) by whose help it expells and throws off all the poisonous matter lurking in the blood.

III. We must of necessity distinguish between the Infection and the Matter. Take away the Infection and the corrupting superfluity, and the matter of it self will not breed a Fever. Common practice justifies this Doctrine: for how many come every day to us to be cured, who have not onely gathered a Cacochymy in the Veins that arise from the *Cava*, but in the Mesaraicks, and first ways also, and are troubled with a great hardness in one or both the Hypochondria, without any great Fever? There is no man but will acknowledge that here the matter is large, but the febrile Infection is onely wanting. After long Fevers, it is a very common thing for Cachexies and Dropsies to follow, when the Fever is extinguished. Therefore I do not distinguish without Reason between the Matter and the Infection; the Infection must be expelled by sweat, the Matter must be taken away by purging and bleeding, and obstructions, if there be any, in the Bowels must be opened. As to the giving of Purges in the beginning, this is my opinion, that the putrid and febrile Infection does not give way so well to a Purge, as to a Sweat, and (if I may so call it) a Magnetick Epitheme: And the humours are too much stirred and disturbed by Purgatives, especially if they be violent; from both which these mischiefs follow: By a Purge, the febrile Infection being left, putrefaction spreads the farther, and upon it the Fever it self is increased and prolonged: And by a Sweat the Infection is more deeply imprinted on the humours, and the thinner part being withdrawn, (for this is fittest for expulsion) the thicker are more closely impacted to the vessels, and obstructions are increased, and the Fever abates never the sooner; nay, the Bowels being thereby spoiled, and now and then new humours gathered together, mischief is often heaped upon mischief. Experience is witness, which has long since shewn, that Quartan Agues are oftner exasperated than cured by too much and violent purging. Therefore all diligence should primarily be intended to the subtracting of the Infection: And it may the more easily be subtracted, the sooner a man begins with it, before it have yet got any considerable strength, before it be thoroughly mixt with the humours, and have deeply infected them, or seized upon some of the inwards. Since therefore, as appears from what is said, that Infection may best of all be thrown out by a Sudorifick given inwardly, or an Epitheme applied outwardly; such things certainly may by no means be rejected, but, as soon as possible, be made use of.

Doringius & Sennertrum.

Febris continua putrida, or, *A Continual Putrid Fever.*

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I. *Avicenna* forbids Blood letting in a Burning-fever, and a Continual Tertian, unless the Urine be thick and red: fearing lest the Bile ferment the more, whose bridle, he says, the Blood is. But this opinion is exploded by the wiser sort, because Nature her self often judges such Fevers by bleeding, and sometimes they produce Phrenzies and other inflammations. Finally, because letting Blood cools powerfully, it rather stops the Ebullition than causes it, for not onely Blood, but Bile also mixt with it is taken away; so that in the mass, which remains in the Veins, there remains the same proportion of Blood to Bile, that was in them before; yea, when the Vein is opened, if the Patient's strength be good, and the Blood burst fast out, onely the putrid, and what is troublesome to Nature, is discharged, the purer remaining in the Veins, which is taken notice of by few Authours, although it be commonly observed in practice. For if the Blood come out of the Vein drop by drop, it is the purest, which comes out in its proper motion: But if it burst out violently, the impure and putrid appears, Nature forcing out the worst part of the mass of Blood. Yet Blood must be let more sparingly, in very choleric natures, in the heat of Summer, and about the Dog-days, than in other Natures and Constitutions. ¶ We must not trust the sign from the Urine proposed by *Avicenna*: for sometimes in a Burning-fever, the Urine has no signs of blood mixt with it, where a Phrenzie is either present or imminent, and yet then it is most necessary to let Blood.

Riverius.

Primeroseus.

II. If it be needfull to let Blood for evacuation, it must be done the same day: If for revulsion, on several. For when we evacuate, especially in Acute Diseases, the Body must be suddenly changed into another state: Then it often happens, that the Disease presently runs through its beginning, so that afterwards we may not so conveniently use Blood-letting. But in Revulsion we have respect to the motion of the humour, which is better done, if at divers times, and some interval allowed, Nature as it were accustoms her self to a contrary motion: for in the interval of time the Blood poured into the parts regurgitates into the Veins, and is usefully drawn out by letting Blood repeated. I apprehend Blood-letting should be repeated, if the Blood that was first taken away be very foul, and plenty of it seem to remain in the Veins. Yea, and though the Blood appear pure, and not at all corrupt at first; yet we must not stop it, but rather continue it till it appear corrupt. And here *Hippocrates* his Rule, *l. de viis. Acut.* concerning the cure of a Pleurisie, has place, namely, that taking away blood must be continued to the change of colour: So that if corrupt Blood come at first, evacuation must be continued till it appear more pure: and on the contrary, if laudable Blood come at first, it must be so long drawn out till the impure and corrupt come. Yet in each case some difference must be used, for if laudable Blood come first, repetition must be made in the same Vein, that the putrid Blood residing deep in the Body, may sooner be drawn out: But if putrid Blood come at the first, Blood must be taken from the other Arm, and consequently either Arm must be bled alternately.

III. Some after Autumnal-agues fall into continual fevers, for want of purging in the end of the former Disease: If you let them Blood, there is great danger lest the sediment, which the foregoing fermentation had let fall, should be drawn back into the mass of Blood, and raise new trouble. Then instead of Blood-letting I use Clysters till the twelfth day, if the Patient be young, and the fermentation over high.

IV. They that undertake the cure of an Acute fever, do at first either bleed immediately, and purge the next day: Or, they first give a Purge, and after let Blood. But they doe injury to *Hippocrates*, *Galen*, and others, with whom it is frequent to cure Diseases quietly, with onely one of these Remedies. So *Hippocrates* 2. *acut.* in a Pleurisie ascending, onely lets Blood, in one descending, he onely gives a Purge. And *lib. 4.* In the first Burning fever he breaths not a Vein, but is content either with a Vomit, or Clyster, or a gentle Purge: In another he bleeds, if the Disease be high, and the strength good. *Galen in Method.* cures Continent and Continual fevers onely by bleeding, nor does he use a Purge, unless a great *Cacochymy* be joined with it. Which Learned Posterity hath carefully observed. Yea, it often happens, that a Purge, which would be otherwise necessary, is omitted after bleeding, because of the wasting of strength, which we fear both from bleeding, and the future agitation of the Physick; and instead thereof a Clyster may be given every other day, according to the advice of *Hippocrates* and *Galen*. Sometimes, for fear of strength, we do not bleed, but onely purge, although in respect of the Disease bleeding were proper. Therefore purging must not always be joined with bleeding, as if one were useless or ineffectual without the other. Fasting has been sufficient for many; Bleeding for others; Purging alone not for a few; onely Clysters for others: All which used jointly would waste a Man's strength.

V. I saw a Woman of a full and fat body, who falling into a Burning fever, took the advice of a certain unskillfull Physician, who let her Blood plentifully; immediately upon which she grew grievous ill, and was in a far worse condition; for as Blood

Aug. Fer rñ.

us.

Vallius.

7. Epul.

abounds in thin bodies; so flesh abounds in the full. Therefore when I was called to the Woman, and found her in extreme danger, I thought all observations should be made use of; that is, those to which the care of him that cures ought to be directed. Wherefore I recruit her strength by all sort of means, which was long before waited, till, when her strength was returned, I thought fit to carry off the matter by a Purge, which I knew abounded in her. Which when I had given my Patient of cold things, the Fever was presently extinguished, and the Woman, whose Funeral was providing, being rightly cured, recovered.

VI. To let Blood in the very height of an acute Fever, *Celsus* said, is to kill the Patient; but it is a particular Counsel, not an universal Precept. In the very height of a Fever, when Permittents are present, and there is danger of the Brain, as to watching, pain, or a delirium; sometimes it is not unnecessary to take away Blood; for the fanning and cooling of the Blood, as it often passes to and fro, through the perspirable Veins. Burning fevers raging with implacable fury, and threatening heavier things, are then lawless, and admit it even in the State. The danger from unbridled plenitude surpasses that which attends unseasonable evacuation.

VII. We must remember, that in Continual Fevers, where there is suspicion of obstruction of the pores, whatever things open and incide, are improper before Evacuation of the whole.

VIII. It is much controverted among Authours, whether Purges may be given in the beginning of Continual Putrid fevers? Which difference, setting aside the turnings and windings of Disputations, may be thus composed; Upon the account of the matter, that immediately produces a Continual Putrid fever, which is contained in the greater Veins; Purging is not convenient in the beginning, unless it be turgent, that is, unless it be so stirred by Nature, who is irritated by its ill quality, and endeavours to expell it, that it be thereby much disposed for excretion. Which, notwithstanding, because it seldom happens, its concoction, for the most part, must be expected, before evacuation of it by Purging Medicines be undertaken. But upon account of the matter contained in the first region, if there be much of it, which may increase the Fever, burthen Nature, and divert her from the concoction of the matter in the Veins, a Purge may be given within a day or two after Bleeding, but it must be gentle, and such as onely evacuates the first region. And we know bad and excrementitious humours abound in the first region, that is, in the Stomach, Guts, Mesentery, or about the Heart, by Thirst, pain of the Stomach, or of some other part contained in the lower Belly, Looseness, and other Symptoms, upon account whereof Purging sometimes must be premised to Bleeding.

IX. Vulgar Physicians, imitating *Hippocrates*, who Purged *Cydes* his Son, on the sixth day, Purge all their Patients, that are sick of Continual Fevers, on the sixth day, that a great part of the noxious humour may be withdrawn, before the battel, which the seventh day produces, come on. But this must not be done without caution, nor rashly, for it is material, what the constitution of the disease is. For the seventh day is not critical in all acute diseases, but in some the eleventh, in some the fourteenth, and in others the seven and twentieth. We must know whether the matter be turgent, whether there be a great quantity, whether there be any concoction, and whether the fluxions of the beginning are ceased, or not. All these things considered, we must either Purge or not Purge, according to the common rules; not onely on the sixth day, but on the fifth, fourth, third, or even the first, if the case will allow it. ¶ *Andreas* being sick of a Fever, took *Mercury* to Purge him

on the sixth day, and it wrought well indeed, yet he was no better, but rather worse on the seventh. An excellent example indeed; what harm a Purge unseasonably given, before concoction of the matter, does; namely, it increases Fevers, and of simple ones, makes double; of intermittent, continual; although the Purge seem to have wrought well to those that are by: Nay, sometimes a Man is hurt so much the more, by how much more freely he Purges, by reason such Stools are caused by colliquation. And I have seen many, presently upon unseasonable Purging, fall into a Consumption: So much ought the common practice of them be avoided, who Purge in all Fevers on the sixth day, when notwithstanding it can be given properly but to a few on that day: Because in most sick persons the beginning is over on the sixth day, or near it, and the time of concoction not yet come. And we Purge about this time but seldom, yet sometimes for necessity's sake we doe it.

X. In the second sort of Burning fever, caused by salt Phlegm raging in the greater Veins, *Hippocrates* 4. de vict. Acut. orders Attractive Broths to be given; that is, to mix loosning Medicines with broth. Wherefore, as in the first (which a bilious Ichor running through the Venous-kind, and especially through the outer small Veins, does breed) he tried to Purge first by a Clyster, and then by Affes Milk, because the matter being thin, and ready for motion, it might easily be carried off by any gentle Medicine; So in this, wherein the peccant humour is salt Phlegm, and far thicker, Purging could not be administered by the same Medicines; wherefore it was necessary to give a Medicine, that by its Purgative faculty might draw off the humours: but lest it should doe hurt by its strength and violence, he orders it to be given in broth. For by this means the saltness of the peccant humour is taken off by the broth, and the driness caused by the Fever is corrected; and that which a Purge usually causes is much hindered, and the Body is at the same time also refreshed. And the noxious humour is partly carried off by virtue of the Medicine that is given, by which evacuation Nature being relieved, can more easily judge the disease. And he would have these broths to be given, as often as the Belly is not loose of it self, by no means when it is loose; for then the solution of the disease is expected from Nature rather than Art.

XI. In a spurious Burning Fever, when manifest signs of coction appear, to wit, when the Fever declines, some gentle Purge may be given, more boldly than in a legitimate one. And I should think that in this especially *Hippocrates* propounded his attractive Broths; so that we should mix Broth with attractive Physick, or give it presently after the Physick, to avoid too much heat and drought.

XII. Some reject Rheubarb, because it heats: And Manna and Syrup of Roses, because they being sweet may easily turn to choler. But if Rheubarb be infused in cooling Waters or Decoctions, or Manna and the other dissolved, they can cause no inconvenience, especially if Tamarinds, which are highly commended for this purpose, be added to the said decoctions, or the Pulp of them be given also.

XIII. If any one inquire at what time of the Fever I would have a Vomit given, I say plainly I would give a Vomit in the beginning of the Fever, if I might have my wish; for so we might fore-arm the Patient from those horrible Symptoms, which derive their original from the filthy humours lodged in the Stomach and parts thereabout: Yea, and perhaps we may crush the disease in the very shell, which would otherwise increase, and grow long-lived, to the hazard of the Patient: for it is nourished by these said humours, which being in their substance transmitted to the inner parts of the body, are mixt with the mass of blood, or being worse

Benedictus.

Rolsincius.

Brudus de vicia.

Riverius.

Vallesius, l. 7. Epid.

Maritanus, comm. in v. 20. cit. libri.

Fortis.

Riverius.

worse by their tarrying there, and infected with a poisonous pravity, and passing continually from their focus, they breathe a malignant vapour on the blood. The disease Cholera gives us an instance of this, for it sometime happens, that they who endeavour to stop the Vomiting unseasonably in that disease (whether it be done by *Laudanum*, or by astringent Medicines) bring on a troop of evils, no less dangerous, when it is stoppt. For the sharp and corrupt humours, whose exclusion should have been so long let alone, as till they had been sufficiently evacuated, being by this means repelled, exercise their violence and cruelty on the blood, and kindle a Fever, which, as it usually is ill-disposed, and accompanied with grievous Symptoms, so it can scarce be cured, but by giving a Vomit, though the Patient have then no inclination to it. But if, as it often happens, I be called too late, and so cannot provide for my Patients health, by giving a Vomit in the beginning of the Fever; yet certainly I think it is convenient to doe it at any time of the disease, if the disease have not spent the Patient so far, that he have not strength to bear the violence of a Vomit. Indeed I have not scrupled to order a Vomit the twelfth day of the Fever, even when the Patient had lost his inclination to it, and not without success: for I stoppt a Loosness, which hindred the blood in finishing its despumation; and I should not scruple at all to give one later, were it not that weakness forbids it.

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de Febr.

XIV. After the Patient is let blood, I inquire carefully whether he Vomited, or was troubled with any inclination to Vomit, when his Fever took him. If any such thing had happened, I ever prescribe an Emetick, except tender Age, or great weakness hinder. Certainly it is so necessary to give it, when such a propensity to Vomit has gone before, that unless that humour be discharged, it will become a sink of many difficult evils, which will create trouble to the Physician, through the whole course of his cure, whence there is no small danger. The principal and most usual of these is a Loosness, which follows in the deservescency of a Fever, as often as a Vomit, when it was necessary, was omitted. For in the progress of the Fever, when Nature has something conquered the malignant humour in the Stomach, and sent it to the Guts, they are so corroded by the sharp humour, and by this fountain, that is always running, that a Loosness cannot chuse but follow; therefore dangerous, because the Patient, who is already weakened with the disease, is made weaker still; and besides, in the declination of a Fever, at what time the blood ought to contract itself, and exert its strength to perform its office of despumation, it is wholly hindred by this evacuation. And I have often observed, that when a Loosness is once come, astringent Medicines doe little or no good, whether used inwardly or outwardly. Nevertheless, I have observed, in Fevers which are abroad in the beginning of Spring, that omission of a Vomit, although a propensity to it have gone before, does not of necessity cause a Loosness, which yet at any other time of the year it causes; therefore then I think the use of one not so necessary, though useful.

Idem.

XV. In the evening after a Vomit has been given, I always make it my business to appease the tumult raised in the humours by the Emetick, and to cause rest; and therefore I order some Paregorick Draught at night about the hour of Sleep. *E. g.* Take of Red Popy-water 2 ounces, *Aqua mirabilis* and *Syrupus de Meconio*, each 3 drachms, Syrup of Red Popy half an ounce. Mix them, make a draught.

Idem.

XVI. This is to be observed, if the condition of the Patient require both Bleeding and a Vomit, you must Bleed before you give a Vomit; for otherwise, while the Vessels are distended with

Blood, there is danger lest by violent straining to Vomit, either some Vessel be broke in the Lungs, or the Brain be hurt by violent forcing of the blood, and so the Patient be taken with an Apoplexy and dye. *Idem.*

XVII. We must consider also, whether, notwithstanding the foregoing evacuations, the blood be not even still in such a heat, that bounds should be yet set to its effervescence. In which case, that the dangers thence imminent may be avoided, the next day after the Vomit I prescribe a Clyster, and order it to be repeated as there shall be occasion; whereby it often comes to pass, that the blood having received vent, its heat is sufficiently bridled. Unless we be forced to repeat Blood-letting once and again, by reason of a very sanguine temper, flower of ones age, or an inflammatory disposition brought upon the blood by drinking too much Wine: But abate the foresaid cases, and we may well enough repress the heat by help of Clysters. Wherefore, if the blood be over-hot, I order a Clyster to be given every other day, and to the eleventh day, or thereabout. Yet if great store of blood have been let, or the Patient be old, then I prescribe none, although the blood ferment very much: For it is certain, that by use of them, the strength of the blood is diminished, and the tone of it (if I may so say) made lax, inasmuch indeed, that the work of Nature, in old Men especially, is interrupted and hindred. *Idem.*

XVIII. Concerning Clysters, it is to be observed, that in the beginning, and through the whole course of the disease, one must be given every, or every other day, if the Belly be not loose enough, of a decoction of emollients and coolers; yet in a more violent Fever it is better not to add Oils, because they are easily inflamed. 2. As to Coolers, in a decoction for one, only two or three Pills of Houseleek must be prescribed, because it cools most powerfully, and used in a greater quantity, it might spoil the Guts. 3. In all Choleric Fevers Clysters should be given not actually hot, but only a little warm. *Riverius.*

XIX. As for Cordials, because it is found by experience, that if they be given too soon, they doe considerable hurt, therefore it is always my care not to give them in the beginning, unless the Patient be weak with former evacuations, or stricken in years; But upon the twelfth day of the disease, when the business is toward secretion, I think we may freely indulge them hot Medicines, if we do not fear that the febrile matter may be driven to the principal parts: For at this time, the more I heat, the sooner I hasten concoction. Nor can I apprehend what Physicians do mean, when they so often inculcate their rules, about giving Medicines to promote Concoction; and at the very same time prescribe Medicines, which may temper the Fever. Indeed the Fever it self is Nature's Instrument, whereby she separates the impure parts from the pure, which is not so manifest in the beginning of the Disease; something more apparent at the height, most apparent in the declension; which the Urine does shew. The concoction of the febrile matter signifies nothing else, than the separation of the peccant matter from the sound; therefore, that you may accelerate this, we must not be taken up with I know not what Attemperants, but the effervescence of the Fever must be permitted so far, as the safety of the Patient will permit. But when it is toward an end, and in the Declension, the Secretion being then conspicuous, then we must follow it with hotter things, to accomplish the business sooner and surer. And this is in truth, to promote concoction of the matter, whereas evacuation and cooling prolong and hinder the cure, as I have often observed. If Fermentation proceed aright, despumation will be finished about the fourteenth day; But if you use any coolers later than that, and

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and so by their means the effervescence be stoppt, no wonder if the Fever run out one and twenty days, or longer.

Mercatus.

XX. The Physician must not use astringents in a legitimate Burning fever, nor very cold things, seeing for the most part it ends in Bleeding, or Sweating: Both which ends such things do oppose, and much less may we use them in such as are not legitimate, seeing the humour in this Fever is difficult of concoction; for thick and glutinous phlegm is bred of cold things, which is the reason that this Fever usually ends in an Abscess, as *Galen 4 de rat. v. saith*.

Riverius.

H. ab Heers
Obs. 22.

Idem. obs. 5.

XXI. We must observe, that Syrup of Violets, and other sweet Syrups, must not be given alone, both because they make the Stomach lax, and also because before they penetrate into the veins, they are converted into a hot vapour by the heat of the Stomach, which afterwards increases thirst; therefore a little of some sower Syrup must be always mixt with them, that they may the more easily penetrate into the veins, and more strongly resist the febrile heat. ¶ I abstain on purpose from Syrups and Conerves in the Plague, and in all Fevers, and in the Bloody-flux; for because Sugar easily turns to choler, I certainly know, it affords fewel to the Fever and Bloody-flux. ¶ *Galen 11. meth.* says, That for the most part the rich are worse cured, than the poor; for which although he alledge other reasons, it is certain, that they who in these Fevers took Syrups, Conerves, and other things made up with Sugar, did usually dye. Sugar and Honey are too apt to turn to choler, and so they increase Fevers, and the Symptoms of Fevers. It is therefore expedient to use either fresh juices of herbs, or such as are dried for use; we having for precedents, *Mesfarius, Bucephalus*, and other most learned Italians.

Riverius.

XXII. Emulsions are usually more gratefull than Juleps, and are then especially of use, when the Fever is accompanied with a dry intemperature of Bowels, or a thin Catarrh, or an Inflammation of the Lungs and parts belonging to breathing. ¶ *Martianus comm. in lib. 2. de Dieta* 164. puts us in mind, that we must consider, what *Hippocrates* in that place says of Cucumber-seeds, that they moisten and inflame, because they are fat and oily. Thence he concludes, that the Moderns doe amiss, who use such seeds to cool: for if Cucumber-seed inflame, because fat, Melon-seed may much more doe it, whose flesh, by consent of all, is less cold than that of Cucumbers. Therefore, he being Judge, the use of them in Pustane, and in Emulsions is not so safe in Fevers, and especially where violence of heat prevails.

Poterius.

XXIII. Sorrel Juice is given in acute Fevers promiscuously, and at hours and days, wherein Nature uses often to move a *Crisis*. Which custome I can no ways approve, for then only a small quantity of things can be used, and that boiled, lest Nature be diverted from her office: So if onely an ounce, or half an ounce of the said juice, well boiled, and clarified by it self, were used, it would quickly be brought into act, and Nature would not be so much hurt by such things, nor have such an aversation to them.

Sennertus.

XXIV. Some use *Saccharum Saturni* in burning Fevers, and a Dysentery, from 3 grains to 4. But the use of it is not so safe: for it takes away Virility.

XXV. Epithems and Inunctions are frequently applied to the Brain, Heart and Liver, when the Fever is come to the state or declension. Before indeed it is not so safe, to cool by applying things: for that we might rather fear, the fire in the Bowels would be more kindled by *Antiperistasis* and constipation of the skin. Nor are they altogether so convenient, in my opinion, at any other time (except, it may be, in the process of the declension)

because here they would certainly hinder the free dissipation of abundance of fumes; and therefore would foment the Fever the longer. Applications indeed please the Patient, as long as they afford a sense of Cold; but a little after they doe harm, the heat being made hotter by keeping in. I should think it were better to apply Pigeons, Whelps, Lungs of Animals, &c. to the shaven head, breast, and *Hypochondria*, to the end the fumes may be drawn out, whereby cooling is caused much more conveniently. But however, so violent a heat does sometimes so weaken the sick, that unless we allow a mitigation of the heat by outward application, very bad Symptoms seize a Man, which it is better to prevent by a cure, not regular (as they call it) for we may, in a little time after, make amends for all the harm done. ¶ In burning Fevers I have found by experience nothing better to abate the heat of the Lungs and Breast, seeing the left hot the Lungs are, the left they heat the attracted Air. Therefore it is abated by moist and cold things, when the Fever dries the body, and the dryness increases the acrimony of the heat. And they are made of moist things, which were first invented by me, that is, of Oils, and Water of Pearl Barley, a little boiled, lest it should obstruct and hinder eventilation by its clamminess, and so a fault be committed worse than the first. They are made also of a decoction of the four greater Cold Seeds, or of a Decoction of Cucurbites, &c. ¶ It is very good to apply cooling Epithems to the Liver, and the whole region of the *Hypochondria*: for they do not onely promote concoction, but they also amend the intemperature of the Bowels, and hinder the principal parts from falling into a Consumption. Cooling things are also beneficially applied to the Stones, because of the consent they have with the principal parts. By reason of the same consent with the whole, cooling of the hands and feet does good. Nor do they hinder the evacuation of Excrements; for little flows from these parts; therefore more good than harm comes from cooling of them. ¶ Observe that Frontals, must be taken off on the critical day, that is, on the fourth and seventh, lest they hinder bleeding at the Nose, which usually puts an end to a burning Fever.

Joubertus

Rondeletius

Riverius

Enchir. Med.

XXVI. We must have a care of very cooling Meats (unless the violence of the heat, not regarding other evils, do require it.) For they both thicken the humours, and stop the passages. But the whole method of cure either consists in extinguishing the heat of the humours, or it shews how the boiling humours may transpire through the body: For a remission of the Fever is caused by transpiration of the hot humours, which we may attempt, either by opening the pores, or an equal diminution of the humours: Whence it comes to pass, that over cold and astringent things, by way of Food (the case is otherwise as to drink) are contrary both to reason and experience. Wherefore before a *crisis* we may not use them: for it often happens, that *crises* have a worse issue, Nature being made dull by the Cold, and the Pores almost shut.

Mercatus

XXVII. Sleep, which is disallowed by several all the time of the Fever (when the heat tends to the outward parts) left in it the heat should turn inwards, must be allowed, because it greatly recruits strength. But since it sufficiently shews, that the heat is drawn outwards, rather than inward in sleep, for that people use to be hottest, and sweat most in time of sleep, and for that very reason, and in that it quenches thirst, it likewise does good; there is no need to fear that, which rather does good, and therefore to keep people from sleep, and so weaken them more: Seeing in sleep nature is not called from her duty, because she is more intent upon the concoction of food, for in time of sleep she minds concoction less; but Nature's power is

Y

not

Platerus.

not idle in elaborating the cause of the disease when a Man is asleep: Yet in the mean time it is better to abstain from sleep in the very fit of a Fever.

XXVIII. If a Fever be protracted, Purging must in like manner be repeated, Preparations and Concoctions being given between whiles, till the whole Mine be taken away, for avoiding a relapse. Yet this rule wants a restriction: for if after several repeated Purges, a slow Fever continue, which insensibly consumes the Patient, and seems to cast him into a Consumption, it will be the best way to omit Purging, and to resist the Fever only by a course of Diet, and altering remedies. For it sometimes happens, where there is some ill disposition of the Bowels, by reason of the continuance of the Fever, that as long as Medicines are given, so long the Fever will continue; for Nature is wearied, which gathering strength again concocts the cause of the disease, and expells it when concocted. ¶ If a right fermentation of the blood have gone before, the despumation of the morbidick matter will be wholly made within the usual time: But if cooling Medicines, or Clysters, have been given too late, the Fever will run out a great deal longer, especially in elderly Men, that have been ill looked after: To whom I being sometimes called, after they had been sick of a Fever forty days and above, have tried every thing that I might bring a despumation on the blood; but the blood has been so weakened, partly by Age, partly by Clysters and cooling Medicines, that I could never attain my end, either by Cordials, or any other strengthening things; but either the strength of the Fever remained firm, or though the Fever seemed to be gone, the Patient's strength was very low, and well-nigh dead. And being deprived of success in other Medicines, I was glad to turn my counsel another way, with no common success, namely, by applying the lively and brisk heat of young persons to the Sick. Nor is there any reason that any one should wonder, why the Patient should be so much strengthened by this method, though unusual, and debilitated Nature helped, so that she may discharge her self of the reliques of the matter to be separated and discharged; since one may easily imagine, that good store of brisk *effluvia* is transfused from a sound and lively body into the exhausted body of the Sick. Nor could I ever find, that the repeated application of warm clothes was in any measure able to do that, which the method now prescribed did perform, where the heat applied is more conatural to Man's body, and also gentle, moist, equal and lasting. And this way of transmitting Spirits and Vapours, it may be Balsamick ones, into the Sick Man's Body, from the very time when I made use of it, although at first it seemed strange, has been made use of by others with great success.

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XXIX. In the cure of very acute and pernicious Fevers, we must take diligent notice of this, that they are seldom caused, without some inward and peculiar disaffection of some of the Inwards, and often with an Inflammation. Wherefore the cure of the *Hypochondria*, Head, Breast, Womb, Kidneys and Bladder, must never be omitted, that by some means or other we may find out, which of these parts is remarkably ill, and may help it as much as may be. ¶ As soon as I find a great burning in people in a Fever, if signs of an inward inflammation, which I diligently inquire, do not appear; yet I think of some such disaffection, and I direct the course of my cure thither, &c. Scarce ever any one of those Fevers appears, that burn violently, so as to have the tongue burnt, or wherein the Belly voids adust stuff; but some of the inner Bowels especially, suffers an inflammation, *Erysipelas*, or at least some overheating: And they are perceived by some remarkable hardness, swelling, pain or heat in that region, where the inward part is seated.

Vallesius.

XXX. But if by reason of much loss of blood, which the Patient has sustained in the method of his cure, or through often Vomiting or going to Stool, or because for the present the Fever is quite off, or because of his weakness, or of the age of the Fever already declining, there now remains no more danger of raising an Ebullition for the future, then, setting aside all fear, instead of a Paregorick draught, I give a pretty large dose of *Dia-scordium*, either without any thing else, or mixt with some Cordial-water. It is certainly an excellent Medicine, Sydenham. if it be given in such a quantity as may make up a Medicine, rather than an empty title.

XXXI. To the constitution of a Continual Fever we require, that its Cause be either in the Vessels that carry the Blood, and so in the Blood it self, and the multifarious parts of it, or such other part of the Body, as has continual commerce with the Blood, and so with the Heart it self; but so, as that it cannot be hindered, or interrupted, unless wholly, nor be restored again at certain times (which usually happens in Agues) by internal causes. We add, that the Blood may be so affected, sometimes by external, sometimes by internal causes, that it may produce a continual Fever. Among the external causes of this Epidemick Fever, I observed the Air was then very hot, and it penetrating as well the skin on all hands, and therefore the Blood it self, as being drawn into the Lungs, and there joined to the Blood, did not kindly temper it again, as it was in a ferment, according to Nature; but by communicating to it its fiery and saline volatile parts, it dissolved, melted and rarefied it too much, and so it greatly vitiated the vital Effervescency in the heart, with its additional heat, and produced a continual Fever. Among internal causes I blamed Bile bred of the same fiery and saline-volatile parts of the Air; but made more sharp, volatile and abundant by the sharp ones: and therefore causing a vitious effervescency as well in the small Guts, as the Heart it self, and indeed joined with notable heat, and therefore without doubt a Fever. The various, and in many respects vitious humours, which must of necessity be produced by the whole mass of Blood, being by little and little corrupted, could not so well be called the cause of the Continual Fever, that was then so rife, as of the various Symptoms, which did many ways vex divers Patients. The Cure therefore of the Continual Fever, as such, ought to consist, 1. In avoiding or correcting the bad Air. 2. In tempering the sharp Bile, fixing the volatile, and diminishing the abundance of it. 3. In moderating, stopping and reducing to its natural temper the vitious effervescency, that is indeed joined with a notable and troublesome heat. 4. In gently coagulating the Blood too much dissolved, condensing the too much rarefied, and cooling it, when over-hot, or reducing it to a laudable integrity, when it is otherwise vitiated. ¶ But though in the cure of our Fever we made no mention of Blood-letting (because we could very well want it, and several have been happily cured without it) yet it is not to be contemned, since especially it is usefull to temper the heat of the Blood, and to prevent Suffocation in Plethorick persons. Therefore it may be usefull for Plethorick persons, for young people, for those that are used to it, for those that are sensible of much heat, for those that desire it, and for those, who, in their imagination, conceive great benefit from it.

Fc. Sylvius.

Idem.

XXXII. Hippocrates, in a Legitimate Burning-fever, allows as much Water and Honey boiled (there must be store of Water) as the Patient shall desire, and he carries the Patient with this drink to the hour of the crisis: This is clear, because 4 de v. Acut. he writes in this manner; And, saith he, unless the critical days be over, you shall not give Broths: Understand with Galen, if the Patient's strength seem good. But if

if you be not confident of his strength, that he may be able to endure to the hour of *crisis* with drink alone; or though the strength be good for the present, yet if you fear a future imbecillity, or because he is of a thin habit, or accustomed to a full diet, you must give him such a sort of food; Boil Pearl barley in Spring-water, which is settled, either by boiling, or long standing; let there be one part Barley, and twenty of Water, boil it till the Barley swell and burst. (This drink may be the Patients diet, where strength is good, without fear of weakness.) Put it in a thin cloth, strain it hard, so as to cause the heart of the Barley to go out; mix this with store of Water, to make a thin broth of it, and give it with a little Sugar: If you mix a little sharp Syrup of Vinegar, so as to make the said broth a little sower, you will make most excellent food for this Fever.

Brutus, de
Vidu Febr.
l. 3. c. 1.

XXXIII. If a Burning fever come from salt phlegmatick matter, the Patients must be fed with a thicker diet, namely, thin Broth; Drink is not a Diet sufficient for such. Wherefore you shall use Broths after this manner; if there be strength, and the habit such, as that the Body waits not easily, and the Man be accustomed to live sparingly in his health: Let him take Broth made of the heart of the Barley, with Syrup of Vinegar, in the manner as is aforesaid. This Diet (and the like) you must understand is convenient for them that are not sick of a malignant burning Fever, which is known by the continual chillness of the extreme parts. Give therefore to them that are sick of a burning Fever from salt phlegm, Broth of Barley, or of Bread thrice washed, putting a good quantity of Syrup of Vinegar, so as it may be very sensible to the Palate. But if the faculty be weak, or if the habit of the Body, or custom give suspicion of future weakness, or if there be a Looseness from the beginning, wasting the Body, we may give Broth made of a Chicken, boiled on a slow fire, adding to it Prunes, and prepared Barley, with as many Kernels of a sower Pomegranate, as you can take in your hand.

Idem, c. 2.

XXXIV. But we must know, that when a burning Fever is bred of salt phlegm, if it be accompanied with a Looseness from the very first, it spends the strength of Nature much. Wherefore they stand in need of a thicker Diet, who are sick of such a Fever, especially if they be of a thin habit, and used to eat plentifully: Because the nature of a Man that is sick of such a Fever, is wasted by the gravity of the Symptoms, and the stubborn resistance of the humour, which will not yield to the concoctive faculty.

Idem, ibid.

XXXV. Hippocrates does most wisely advise 4. de rat. v. acut. to give attractory Broths in the cure of a malignant burning Fever, that is, he would have us mix Broth with a Purge, that draws: for he could not give a better name to a Purge mixt with Broth, than one compounded of either Simple. So Galen, in the Cure of an Inflammation of the Liver, uses Bark of Hellebore, Mercury and Fern in Pti-fane, and it is no vulgar rule in a violent or malignant Fever; Namely, when Purging is very necessary, and the Physician is afraid, because of the weakness of his Patient, he will doe advisedly, if, when he would give a Purge, he give it his Patient in Broth: For so the Physick will move him less, and will also heat and dry him the less, all which things happen in a violent and malignant Fever. Besides, a Purge so given less waits the strength of Nature. In a malignant or pestilent Fever it is the best way of giving a Purge, than which there is no other more sure, and with less damage.

Idem, c. 3.

XXXVI. Some Physicians do give the Pulp of Cucumber or Citrul in both the burning Fevers; others, Lettuce, Purslain; others, Almond-milk, Endive with Vinegar, or Juice of unripe Grapes, or of Berberies, or of Citron; but as much adverse as Astringents are to a legitimate burning Fever,

so much are powerfull Coolers to a bastard one; which you may understand chiefly from this reason; A legitimate burning Fever ends in Bleeding or Sweating, as we learn from Hippocrates, But what things are over potently cold, and they that bind, oppose both ends. That exceeding cold things are not convenient for a bastard one, is manifest from reason, because the humour of this Fever is difficult of Concoction, and for this reason especially, because it is a cold, glutinous and thick Phlegm, that causes this Fever, wherefore this Fever usually ends in an Abscess, as Galen, 4. de rat. v. writes; therefore any one may perceive that very powerfull Coolers are incommodious to this Fever: But Astringents, unless given upon the account of a Symptome, make both the sorts of burning Fevers pernicious, or of an ill *crisis*.

Idem, c. 48

XXXVII. The sort of Diet in both the Continent Fevers, is like to that we said was convenient for a burning Fever. For since both of them is a Fever, that has no intermission, it indicates, the Patient must be kept with drink. And, because this Fever seldom happens with a weak faculty, or a hot and dry constitution, nor with a thin habit of body; for this reason we inquire in this Fever onely concerning the Custom; whom therefore you shall know to have lived sparingly in their health, them you must onely nourish with drink.

Idem, c. 58

XXXVIII. In a putrid Continent we must observe before Bleeding, Purging or a Clyster, Barley-water must not be given for a good space of time, as Hippocrates teaches.

Idem,

XXXIX. We must not forget, that in this Continent one from Putrefaction, the Diet should be a little more solid: For a disposition from the corruption of humours indicates increase of food, according to Galen, aph. 8. Moreover, Nature sooner sinks under a Fever and Putrefaction seizing a man together, than under a Fever alone.

Idem,

XL. Our younger Physicians make their Meat in continent Fevers of Gourds, Spinage, Lettuce, Purslane and Pulp of Citruls. But since these are very acute Fevers, Nature cannot undergo them long; for a *crisis* comes quickly, wherein either Nature conquers or is conquered, as Galen, 1. ad Glau. writes, Therefore the Physician ought with all his diligence to take care, that he indispose not the ways either of the humour or the body to a *crisis*. But a Diet of cooling Herbs may sooner doe this than abate the fiery quality of the humour, or quench the Patient's thirst, which can scarce be laid by drinking a great quantity of cold water at one draught. Therefore in continent Fevers it is to be feared, lest a Diet of these very cooling Herbs cause either Death or an ill *crisis* by indisposing both the body and humours of the sick for Bleeding at the Nose and Sweating.

Idem, c. 61

XLI. Avicenna lays, there are some who will allow Ju-jubes and Vetches with Vinegar, and with Pomegranates, and with Sumach, when they have an intention to thicken the Blood, or when Nature is too soft. And he subjoins, And if any of these things be feared, because of their binding; lest, namely, it should make the Belly costive, its Astringency may be broken with Prunes or some such thing, and he may then be fed with Meat made of Gourds and Sorrel. And a cold Sallet is good made of Sorrel, Endive and Lettuce. But it may be some one may object, What advantage of any moment can follow the thickning of the Blood in a continent Fever, that for its sake he durst mix Sumach in Sallets in such a Fever? Yet he seems to have allowed it for a twofold reason, namely, either for thickning, or on account of a Symptome, as when the Belly is looser than it should; But for the thickning of the Blood, I think it by no means proper: For it seems not the part of a prudent Physician, in a Flux that comes either from the whole or from some one part unto another, to thicken the bilious Blood with things that are very astringent, lest perhaps we detain a superfluous

humour, when it is on motion, in some part of greater moment, or lest we fix that firmer which is in the part affected already. Now, in a continent Fever, the boiling Bloud swells high; like Water boiling in a Pot; you may abate the heat of this, and not take away the fire, if you slacken the fiery quality from the water; and this you may doe, either by pouring in cold water, or by uncovering the Pot, that it may be cooled by the Air. So also in a continent Fever, we may either abate the hot humour by drinking cold Water, or we must endeavour that the boiling fumes may freely transpire through the pores of the body; and this is the surer way to health, for a remission of the Fever may be caused by the transpiration of the fermenting humours, which may be done two ways, either when the pores of the whole are opened, or the humours are equally diminished, as Galen, in m. m. teaches. But Astringents, among which Sumach is a very violent one, they are so far from making perspiration free, that they hinder it, by stopping the body: for of the three causes that hinder transpiration, stopping of the body is one. Therefore from these things it is manifest, that Sumach, and other Astringents are too much enemies to continual Fevers, because they hinder transpiration, which is a cause of the remission of Fevers. We may use such as are moderate, upon the account of a Symptome.

XLII. Some give Pullets Livers roasted, after Broth, to them that are sick of a continual Fever, which I do not at all approve. For Meat stays a long time in the Stomachs of sick people, which is no small occasion why it is corrupted. Besides, a roasted Liver must be reckoned among drying Meats, wherefore it is not proper for one in a Fever, an argument whereof is Thirst, which it causes.

Ibid.

Febris intermittens in genere, or, An Ague in general.

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I. THAT we may make at least some conjecture about the Nature and Disposition of Agues, we must take notice that these three things ought to be considered in a Fit: 1. The time of Shaking. 2. Of Ebullition. 3. Of Despumation. As to Shaking, I think it arises hence, because the febrile matter, which being not as yet turgent was after a sort assimilated by the mass of blood, is now at length not onely useles, but become an enemy to Nature, does in a manner exagitate and provoke it; whence it comes to pass that, being irritated by a certain natural sense, and as it were endeavouring flight, it raises a Shivering and Shaking in the body, a true Witness of its Averfation: Just as purging Portions, taken by squeamish Persons, or Poisons, swallowed unawares, use presently to cause a Shivering and other Symptomes of that nature. Nature therefore being irritated in this manner (that I may come to the time of Ebullition) that she may the more easily keep this enemy from her Throat, falls upon Fermentation, namely, an usual Engine, which it is accustomed to make use of in Fevers and some other acute Diseases, when it endeavours to free the mass of blood from inbred enemies: for the disjoined parts of this peccant matter, which were equally mixt with the blood, do, by the benefit of this Effervescency, begin in some sort to be gathered together, and so may the more easily be wrought upon, so as to become fit for Despumation. By the name of Despumation I would have nothing else understood, than the Expulsion or Separation of the febrile matter now brought under and as it were conquered. And what is separated, has the nature partly (as we may observe in other Liqueurs) of Yeast, and partly of Lees. But the Fit returns, because the febrile matter is not as yet all gone, but as young Bees grow up insensibly at set times, so this latent matter, according to the nature of the Fits, shews its head again, and creates Nature a new trouble, running over the same course, which we have shewed before.

II. And of Agues, some belong to the Spring, others to Autumn. For although some arise in the intermediate seasons; yet, because they are not so frequent, and may be reduced to the former (to those namely, which they are nearest to) I shall therefore comprehend them under these two kinds. And indeed this distinction of Agues is so necessary, that unless in our practice we take notice carefully of it, we can neither make our prognostick aright how long they will last; nor keep our Patients bodies under a right regiment, with respect to the different nature both of the Seasons and the Agues. It is true indeed, the Agues of each Season have their nature not altogether unlike, whether you consider the manner of their first coming, which first begins with Shivering, by and by bursts out into Heat, and at last ends in a Sweat; or the difference of their Types, in respect whereof there are some Tertians both Spring and Fall; yet, in the mean time I do not doubt, but these Fevers are fully distinguished in their nature, or essentially.

III. And, that I may first speak of Vernal Agues, they are all either Quotidians or Tertians, and they come either sooner or later, according to the various disposition of the season. For in Winter time the Spirits are concentrated, and in their recess gather strength to themselves, which being now brisk, the heat of the approaching Sun draws out, and being mixt with the viscid humours (yet they are not so viscid, as those the heat of the foregoing Autumn has boiled and roasted) which Nature, during Winter,

Sydenham, Tract. de Febrilibus, p. 69.

Idem, p. 72.

ter, had gathered in the mass of blood, while they endeavour to fly away, are kept implicated, and as it were intangled, and so they cause the Vernal Ebullition: After the very same manner as Vessels full of Beer, and set long in a cold Cellar, if they be set near the fire, they presently begin to work, and the Liquour is apt to fly; The Blood being in this manner affected, endeavours the Purging of it self, and by the help of volatile Spirits does the business soon enough, unless perhaps it be too full of viscid juices, which may hinder the fermentation begun: And though this happen; yet the Vernal Effervescence is seldom continual and constant, but is usually parted into several fits. For the Blood being now turgid with these rich Spirits, Nature falls to her work as it were in haste, and makes a secretion of some parts by particular Paroxysms, after the manner of perfect solution, before she finish universal separation. And this seems no improper reason why in Spring-time, especially that part of it which is nearest Summer, we meet with few continual Fevers (unless perhaps the constitution be Epidemick) for the fermentations, that then arise, are either quickly laid, or hasten to an intermission; or finally, the parts of the humours being more prone to separation, are too hastily and with some violence translated to another place, from whence by and by Quinsseys, Peripneumonies, Pleurifies, &c. do grow, shewing their heads especially in the latter end of Spring.

Idem, p. 73.

IV. Therefore we may undertake these Agues various ways, and indeed with desired success, as it is abundantly manifest to me from frequent observation. Sometimes a Vomit given in season, namely, that it might do its work before the fit, succeeded well, especially if you give a large dose of *Diacondium* when the Vomit has done working, immediately before the fit comes. Sometimes you may observe Health recovered by Diaphoreticks, which may provoke Sweat arising in the end of a fit, covering the Patient well with clothes. And it must be done as much, and as long, as the Patient's strength will bear it, and this has often done the work in Spring-agues, especially in Quotidians. For the humours in this season not being very thick, the solution, that would otherwise be imperfect, grows to a perfect one, which indeed never happens in the Autumn. What shall I say, for that I have cured Tertians sometimes by the benefit of a Clyster, given on the intermission days, for three or four days together? Nevertheless, if those Spirits be depauperated and weakened, which should suddenly make themselves ready for despumation, either by reason of Phlebotomy celebrated with too liberal a hand, to which the season it self easily inclines the unwary, or through some antecedent weakness of the Patient, it may so happen, that these Vernal-agues may vye in length with the Autumnal; but, indeed, they last not quite so long, because they either end of themselves, or are more easily cured with light Medicines.

Idem, p. 74.

V. But Autumnal-agues are not so easily removed. If the Autumnal constitution be Epidemick, they use to come about the latter end of June: If not, they tarry till August and the beginning of September; in the following months they more rarely occur. Alsoon as a great troop of them comes together, you may observe the fits to come all at one and the same hour of the same day; the fits sometimes preventing and sometimes postponing, in the like manner and the same tenor, unless it so happen, that this order be altered or perverted in some bodies by Medicines which have a faculty of stopping or hastning the fit. In respect of their Types they are either Tertians or Quartans, and it may safely be said of Quartans, that they are the genuine off-spring of Autumn: Truly they are so near of kin one to another, that they are oftentimes found to take their turns, at least for a time; and it may

be presently they will return to their wonted *Genus*: But Vernal Tertians never put on the Types of Quartans, for they are as far different as Heaven and Earth. Nor farther have I ever observed a Quotidian come at that season, unless one will have a double Tertian or a treble Quartan in accurate speaking so called. Now, I suppose, these Agues derive their original in this manner; namely, as the year comes on, the blood also is exalted according to the rated proportion (just as all Vegetables shew the course of the year by their increase and declension) till they come to their height and utmost vigour: Then proceeding in parallel motions with the seasons of the year, and as the year declines, it also begins to be relaxed, and then especially when it is promoted by any accidental cause, suppose by immoderate loss of blood, taking cold, by crude and excrementitious meats, unseasonable use of bathing, &c. Now if the blood, constituted in this state of decedence, decay so far, as that it is not able to maintain its oeconomy, and protect its fortunes with its present stock, Nature, taking new advice, does at length incline to this, that it may prepare a certain new texture for the effete mass, and so endeavours an alteration of affairs, so contriving it, that the parts of the mass of blood, which are most subservient to change, may conveniently be separated. And hither tends the ebullition that was now caused, which seizing the blood sometimes, when it is very degenerate, the Fever arising from thence uses to be untoward, and full of malignant and horrible symptoms. However this comes to pass, that the blood being spoiled of a great part of its spirits, and much burnt by the foregoing Summer, performs its ebullition but by slow motions, and requires a very long period for its despumation.

Now, that it may appear how difficultly these Fevers admit a Cure, it must be considered in this place, that the difference of continual Fevers in this season and of Agues consists especially in this, that continual Fevers constantly carry on the effervescency in one and the same tenour, when once it is begun, and Agues perform the same at several turns and divers times. In the mean time fermentation is performed in both by Nature's duct in the space of 336 hours or thereabouts: for the mass of blood in a humane body is not usually purged sooner or later than so, if you leave the business to Nature, just as Cider, Wine and Beer, have each of them their peculiar period, wherein they are depurated. And although in Agues the blood sometimes (as it happens in a Quartan) endeavour its despumation in the space of six months, and at length perfect it; yet (if you calculate aright) there is not more time spent in performing it, than what naturally uses to be spent in continual Fevers, for 14 times 24 hours, or 14 natural days, make 336 hours; namely, allowing 5 hours and an half to every fit of a Quartan, you will have in a Quartan the value of 14 days, that is, of 336 hours. Now if any one should say, a Quartan, for example (for the like account is to be understood of other Agues) sometimes runs out beyond the space of six months, before it finishes its period: I answer, that the same thing is usually seen in continual Fevers, which are often protracted beyond 14 days: And in either case, if you have a care that the effervescency (especially towards the end of Fevers) go on well and in good order, and be kept up brisk, despumation will be finished within the space of time aforesaid, that is, in 14 days or 336 hours: But if at that time (that is, towards the declination of the Fever) you unseasonably hinder the effervescence either by Medicines that cool the fermentation, or by use of Clysters, and give a check to it, no wonder if they last long, because the order of Nature is disturbed: for by this means the tone of the blood is in a manner relaxed, wherefore

fore it cannot betake it self to despumation with the Disease; yea, and sometimes in weak and spent bodies the same happens spontaneously, unless you assist Nature languishing in them by the help of Cordials, that it may be sufficient for the despumation of the blood.

Idem.

VI. These things granted, no wonder if men build no other method of Cure upon them, than what is thought fit to be used in continual Fevers, to perform the work of despumation as it ought to be done, since doubtless they are distinguished by no discrimination from continual Fevers, if you consider the order wherein nature uses to expell the matter of them, that is, by an Effervescency comprehended within a certain period: Although as to what concerns their kind, and property of Nature, I do not deny, but they differ very much both from continual Fevers and among themselves. Therefore we must take an Indication either from cautiously and solicitously observing the method wherein Nature uses to rid her self of this Disease, that we may quicken fermentation, when arisen, and so recover our Patients: Or by searching into the specifick cause, we must doe our endeavour to meet with the Disease by effectual and specifick Remedies. Indications must be taken from one of these two. I have at one time or other gone both ways to work, and, I can modestly say it, not without very great care and intention of mind; but yet I am not arrived to that happiness, as to be able to remove autumnal Agues by any certain practice or method of cure, before they have finished these stated fermentations, how troublesome soever this may seem to people in Agues, who are so long against their will compelled to wait for their health. But indeed if a man can be found, who knows not only suddenly to stop the career of these Agues, but wholly to break it off, either by using some certain method, or some Specifick or other, I hold him obliged in Conscience to discover the thing. But as I think it a thing difficult enough, so I doubt not but it is likewise dangerous: A clear Instance whereof we may have from that they call the *Jesuits powder*; for although by the use of that Powder we may stop fermentation for the present, yet the matter still remaining, which should be dissipated by fermentation, in a short space of time gathers strength again, and proclaims a new War against Nature. I have known a Quartan continue for some years, while it was ever and anon disturbed by the repeated use of this Powder. Yea, this Powder, given immediately before the fit, has taken several away out of this life; though I will not deny but such Medicines given prudently and cautiously towards the latter end of these Agues has sometimes done good; especially, if they be given in a season, wherein these Diseases are not very epidemical. ¶ Nevertheless, although from what we have now observed, we can scarce have any hope of recovering health soon, yet room is left for a Learned and Sagacious Physician, to procure a due depuration of the blood, to the end it may be finished within the bounds set by Nature, and also to prevent those Symptoms which usually come upon this Disease. Therefore I will in a few words, and as the nature of the thing will bear, briefly treat of this matter, comprehending both kinds under the same Head, because the same Cure is proper for both, that is, for a Tertian and a Quartan.

Idem, p. 82.

VII. If therefore the Patient, that is taken with either of these Agues, be either an Infant, or in the Flower of his age, it is altogether convenient (as far as I am hitherto informed) to attempt nothing by the help of any Medicines, or by the change of Air or Diet, for to this day I never yet observed any ill ensue upon it, if so be I left the matter to Nature wholly. A thing that I have often observed, not without admiration, especially

in Infants, for when the blood has finished its depuration, these Agues vanish of their own accord. But, on the contrary, if you either use a stricter course of life, or now and then use purging Medicines (for they use to be given on pretence, that obstructions may be opened, and humours residing in the first ways may be carried off) or, which is the main thing, if you let blood in an epidemick constitution, it will make the Disease continue a long time, and the Patients exposed to a thousand dangerous Symptoms.

Idem, ibid.

VIII. But if the Aguish persons be of elder years there is great danger in both Diseases, not onely of their continuance, but of death it self. Here therefore the Physician must make it his business to assist Nature, and give her those Aids which she stands in need of to doe her office. For certainly, in weakly bodies, unless fermentation be kept up by benefit of Cordials and a strengthening Diet, it will so come to pass, that the Patients being vexed with uncertain and fruitless Paroxysms, are weakened, and the Disease will continue so long, till Nature, languid before, be seized with some violent fit, and is not able to reach to the time of ebullition, and so the Patients end their days in the cold fit. And this often happens in old Men, who have been weakened with a long course of Purging, yea, (as I have sometimes seen) they have quite fainted in the first cold fit, when by giving some strong Cordial, they might have been kept up for some time at least. When the blood has spent as much time as is required to finish despumation, it is necessary that the elderly Patients, at that very time, or a little before, do undergo some remarkable change of Air, either (which is rather to be wished) by going into some hotter Countrey, or at least by changing the place wherein they were first taken with this Disease. Truly it is wonderful of what avail this change of Air is towards the thorough cure of this Disease; in the mean time it is not onely unnecessary for the Recovery from this Disease, to change the Air before this very time, but inconvenient: For let a Man go into never so Southerly and hot a Clime; yet if the blood be once got into such a morbid motion, it is necessary that it finish its depuration, which advantage indeed will be in vain expected from an unusual and new Air, before a Man be capable of Recovery by the blood's motion proceeding and being become ripe. Therefore that remarkable change of Air must then first be undertaken, when the Patient can be first rid of his fit; for example, in a Quartan, that first came in Autumn, the Air must not be changed till about the beginning of February. In the mean time, if the Patient be either unwilling to change Place, or cannot conveniently, it is needfull at the article of the very time, to use some strong Medicine, whose strength may be such, that it may at one stroke as it were, powerfully promote the languishing depuration, and, if it can be done, finish it. For this purpose I should advise to give a drachm and an half of Venice Treacle or *Electuarium de Ovo* dissolved in two ounces of *Aqua Calensis* or *Aqua Vita*. A thing which I have done with no unhappy success in the declination of such Diseases: Although I acknowledge, these hot things, given sooner, either double the Disease, or turn it into a continual Fever, which has been long since observed by several. The same may be used in young People who are held of this Disease, using caution. But to doe the same in Childhood is not onely inconvenient, but also not without danger, as I have long since observed.

Idem, p. 82.

IX. It must be observed, in the beginning of these Diseases (of a Tertian especially) that it sometimes happens that the effervescence in young and strong men is so far increased, that you might deservedly think it safer to prevent the storm in coming than to commit the whole affair to Nature; And

And this may be done most conveniently by giving a Vomit on the intermission day; for such sort of Medicines are very convenient for most autumnal Diseases, and prevent those symptoms whereunto they are obnoxious in the height: But when this is done, the whole affair must be left to Nature. And sometimes it happens that autumnal Tertians (in young People especially) out of the violence of their effervescency, and their mad motion, do finish their depuration before the determinate time, and so after a few fits vanish, the work of Nature being certainly precipitated. But Quartans do not so quickly finish their course, unless perhaps the Patient have been formerly sick of the same Disease; for in this case, although he may be exercised with some fits; yet the Physician, being assured of the thing, may boldly predict the Disease will suddenly vanish, which is worth observation.

Idem, p. 85.

X. When the Ague is over, the Patient must be carefully purged; for abundance of Diseases follow upon want of purging after autumnal Agues. But you must take diligent heed; for if, when the fits are ceased, you fall too soon on Purging, there is danger they will return, namely, from the disturbance, which even the more gentle Purges use

Idem, p. 88.

XI. That the blood may be reduced to its natural temper, Vomiting, Bleeding and Purging are of great use, especially if they be given in the beginning of a Disease. Vomits doe good, in as much as they cleanse the Stomach, that the first Concotion may better be performed, and thereby more pure nutritious Chyme may be supplied for the matter of the blood, but especially inasmuch as they discharge Choler, while they plentifully strain out the Gall-bladder by the Gall-passage, that by this means the Bile may more perfectly be washed from the mass of blood, and that so the blood may be purified from the adult recrements of Salt and Sulphur. Letting blood cools and gives vent to the blood, and therefore it is less scorched, and is more freely circulated in the Vessels without danger of Adulion. Likewise Purging does plentifully squeeze out Bile from the bile Vessels, and consequently from the mass of blood. To this end (that is, the Reduction of the blood) Digestives, Sowre things, Attenuants do conduce, inasmuch as they give fusion to and alter the blood, and allay its heat. But Vomiting, Purging and Bleeding, unless they be immediately celebrated at the very beginning, they doe little good; yea, they often use to doe harm, for while the blood is full of vital Spirit, its indisposition may be corrected and amended with ease. Wherefore, if about the beginning Bile be plentifully discharged, or the blood cooled, it is reduced to its natural temper; yet afterwards, in the progress of the Disease (when the Spirit is much spent, and the Salt and Sulphur are too much exalted) if such evacuations be used, they much debilitate the frame of the blood: And therefore it is evident from observation, that the Ague is seldom or scarce ever cured by these Remedies, used late. I have known some in the Spring-time, who, enjoying their health well enough, upon taking a strong Vomit for prevention sake, that wrought violently, have presently fallen into a Tertian; And others sometimes, who being cured of an Ague, upon taking a strong Purge to carry off the Remainder of the febrile matter, have presently relapsed. One would be ready to say, that the matter of this Disease, before laid asleep, was by this means stirred up; and brought into act, by the Purge; Yet, if you consider the thing a-right, one would rather say, that the frame of the blood is much hurt by the violent Purge; and whereas before it was prone to a bilious dyscrasia, so as it could scarce assimilate the alibile Juice, it will presently, for this evident cause, degenerate the more, and immediately pervert the

nourishment into fermentative matter, and so be susceptible of a feverish disposition.

Willis, de Febr. c. 4.

XII. The hindring an Ague fit is accomplished by Medicines which stop fermentation; And although this Remedy be among Physicians accounted immethodical and very uncertain; yet it is certain that Agues have been often cured in this manner, when Medicines would doe no good at all. Onely here we must observe this, that the use of such things is most beneficial after Purging and Bleeding, if this be necessary; and unless these things be rightly premised, the other seldom stop a fit. There are not wanting Men, who to abate or stop the fit give Opiates. On the other hand also there are some, who judge, that Agues must not be stoppt at the very first, but that the fit should be suffered for awhile. Hence, an Ague once begun, if it end in any reasonable time, is vulgarly termed rather Physick, than a Disease; for by this means the impurities of the blood blaze out, the obstructions of the bowels are opened, and, indeed, the whole body receives Vent; so that it is wholly freed from all excrementitious matter, and from the Seminary of growing Diseases. And we grant this in part, to wit, if it end in a reasonable time; but if it be protracted long, it is the cause of many Diseases and long Sickness: For hereby the mass of blood is much spoiled of the vital spirit, and like over-high fermented Wine, it palls: In the mean time, the saline and earthy parts are too much exalted, wherefore the Jaundice, Scurvey, Dropsie, and other Cachexies follow this Fever too late cured. For as a House set on fire from without, is easilier delivered from danger of Burning, than if Vulcan were pulling down the inner Rooms, so also it is more easie to drive away Agues from humane bodies in the beginning, than after the Agues have invaded the inner oeconomy of the bowels. And of a depurative fermentation of the humours, if it should exceed measure, a corruptive one may easily be made.

Willis, ibid.

Frid. Hoffmannus, m. m. p. 274.

Sylvius his method of Cure.

XIII. Forasmuch as we have made the Cause of Agues, as Agues, to be the pancreatick Juice, by reason of an Obstruction made in its lateral Duets, by Phlegm coagulated therein, and then made sharper and Sowrer by stagnation, and carried hence, by making way through the obstructing Phlegm, to the small Guts, and there vitiously fermenting with the Bile in its way and the Phlegm in the Guts, and then at length creeping along with them under one form or other to the right Ventricle of the Heart, and in it not onely by irritating the Heart with its acrimony or flatulency raising a more frequent Pulse, but moreover divers ways altering and disturbing the vital effervescency and sanguification it self, and producing many symptoms in divers places: Their Cure may be performed, if first, the obstructing Phlegm, that is more or less glutinous and coagulated, be cut and loosned, and then, as offending in Place, be removed, and at least be brought as far as the small Guts, if not cleared of the Body it self. Secondly, if the acidity and acrimony of the pancreatick Juice, that is increased, be tempered and corrected. Thirdly, if the vitious effervescency of the Bile in the small Guts be hindered or amended. The obstructing Phlegm is cut by Aromatics and any volatile Salt, but especially so used, that the whole body may be hot at once, to the end the virtue of the Medicine being dispersed every way may reach also to the Pancreas it self, and to its Lateral Duets, and so to the place affected, and the Source of the Disease; Which things are proper especially for phlegmatick and melancholick Persons. Let the following Mixture serve for an Instance, a spoonfull of it at a time to be taken several times a-day; But two or three

or three hours before the coming of a new fit, to take three spoonfulls of it, at the same time gently increasing the heat of the body either by motion, or cloths, or fire, or a bath, till the Sweat come, for so it will doe more good, and sometimes take the Ague happily away: Take of Waters of Parsley 2 ounces, Fenil 1 ounce, *Theriac. simpl.* or *Vite Matthioli*, 1 ounce and an half; Volatile Salt of Amber 1 scruple, Syrup of *Carduus benedictus* 1 ounce. Mix them. As often as the complexion of the Patient is observed to be cholerick, use loofners and fowre cutters; Take of Fumitory-water 3 ounces, *Sal Ammoniac*, or *Tartarum Vitriolatum*, 1 drachm; *Antimonium Diaphoreticum* half a drachm, Syrup of Fenil 1 ounce. Mix them. As often as both phlegmatick and cholerick humours abound in the same Patient, of the two Subcontraries that were now commended, these Mixtures may be made; Take of the Waters of *Carduus benedictus*, Cichory, each 1 ounce and an half; *Theriac. simpl.* distilled Vinegar, each 6 drachms; Crabs-eyes in Powder half a drachm, Syrup of the five opening roots 1 ounce. Mix them. If the obstructing Phlegm be not very glutinous, oftentimes at once such Sweating the obstruction is wholly removed, and the cause of it is carried into the small Guts, and the Ague is cured. In a Body that has but little Phlegm in it, but more Bile, a Vomit may be given three or four hours before the return of the fit, by means whereof not only the redounding Bile, but also the obstructing Phlegm is forced to the small Guts, hence to the Stomach, and at last out at the Throat and Mouth, and so the Ague is said to be destroyed. To which end I have often with success used a Vomitory *Sapa* prepared by me of Glasse of Antimony, and other Medicines may in like manner be prepared of Antimony, which is here proper above all other things. Things that purge downwards now and then will doe the same thing; but ever adding things that at the same time cut and carry off viscid Phlegm; for example, Take of the mass of *Pilul. fetid. maj.* half a scruple, Trochiscs of *Albantal*, *Mercurius dulcis*, each 5 grains; Oil of Amber 2 drops. Mix them. Make 5 Pills. Let them be taken four or five hours before the next fit, and they will purge gently. The augmented acidity and acrimony of the pancreatick Juice will be happily allayed with volatile Salts, and all Aromatics, not neglecting Opiates: Therefore the Mixture above proposed of Waters of Parsley, Fenil, &c. will be proper, which will be more effectual, if there be added to it of *Laudanum Opiatum* 3 grains, Oil of Cloves 2 drops. The vitious effervescence of the same pancreatick Juice and of the Bile will be hindered, at least corrected by the now commended Mixture, especially because of the *Opium*, wonderfully allaying and tempering both the Sharps with its Oiliness; and from these few Receipts any young Practiser may easily invent others, as he shall have occasion.

Sylvius de le
Buc. Frax.
Med. l. 1.
c. 30.

As well Acids, as Aromatics and volatile Salts, do every where dissolve and cut glutinous Phlegm. They will dissolve it in the forementioned Ducts, if they be carried thither. And all Medicines are carried sooner and in greater power, if they either be Evacuators, or joined to Evacuators; For this seems peculiar in Evacuators by Vomit, Stool, Urine, Sweat and Salivation, that they make no long stay in the Stomach and Guts, but, unless they be hindered by the humours and food, they pass quickly into the lacteal Veins and Heart, and hence every way with the Blood. But in our case, that is, in Agues, it has been observed by long experience that Sudorifics above all other things do most easily conduce to overcome the cause of them, by help whereof the very common People cure Agues.

And Sudorifics seem to be proper above other things, because Sweat is not raised, till the whole

blood be moved, which then also is made more fluid than usual, wherefore whatever things are mixt with the blood, are both sooner and more abundantly dispersed every way with it; and therefore Medicines designed to loosen Phlegm.

But as Medicines to loosen Phlegm must especially be mixt with Sudorifics, so also Medicines, that move the same from its place, are preferred, whether Purges or Vomits. For the way is but short from thence to the small Guts, and hence to the Stomach, whence the Phlegm may be cast up, and oftentimes a Tertian may be killed at one Vomit, it owing its original not to very tough or copious Phlegm. So there is an ordinary and easie way for the humours downwards to the small Guts, especially when they are thrust down thither by Purges. And thus I have often observed, Agues have been cured quickly and safely, especially Tertians, by Sweating, Vomiting and Purging, because they are the easiest cured of all, as for the most part they have their rise from small Obstruction, that is, from less tenaceous Phlegm obstructing the said Ducts. Therefore to loosen and make fluid the Phlegm stopping the said passages, Sudorifics above all other things, made of Aromatics and volatile Salts, as also of subtil Acids, and often taken at any time, although Sweat do not always come, do conduce.

To remove the same from an improper place, when it is loosed, 1. The same Sudorifics are proper, but taken not long before the coming of the fit, the Body being rightly constituted to promote Sweat. 2. Vomits and Purges taken about four hours before the coming of the fit, that so in the mean time the humour first made more fluid by Sudorifics, may be farther prepared for its discharge, and so with the stagnant juice may be displaced and thrown out of the body. 3. Volatile Salts and other Aromatics do most effectually mitigate and temper the pancreatick Juice, made more acid by its stay and stagnation, because they most easily penetrate every way, and do not only break the foresaid augmented Acidity, but also cut and loosen the obstructing Phlegm, and so are proper upon several accounts. Because volatile Salts are pure and not oily, they foment or increase no heat, a thing very usually arising and troublesome in the increase of the fit, which cannot be said of Aromatics, seeing the febrile heat is often not a little encreased by them.

Wherefore in the choice of proper Medicines for curing Agues we must take especial notice of the natural and preternatural constitution of every Patient, and therefore of the humours that are most abundant and peccant, and more yet of the Symptoms usually arising with the Ague fit, and especially of the Cold and Heat, as most troublesome to Patients.

Truly the efficacy of volatile Salts is very great, and moreover their operation is both very safe and innocent; which cannot always be said of several parts of Plants and Medicines made thereof, because they produce a more manifest and often a troublesome Heat to us, to say nothing farther now of the Cold, which likewise is frequently raised by Vegetables; but not so by the volatile Salt of Animals, which are not at all oily, such as may easily be prepared. From whence the utility of volatile Salts in curing Agues does farther appear, for that they alone answer several Indications; and, 1. To loosen obstructing Phlegm, and move it from its place. 2. To temper the pancreatick Juice, when made more acid, which last cannot be done by any Acids, how spirituous soever: And we said, they are requisite for the Cure of Agues. 3. That the febrile effervescency may be checked, quieted and corrected, as well in the small Guts as in the Heart, a thing which in particular Anodynes and Narcotics or Opiates doe, as also all other things, which

which incline towards their Nature, such as the fixt Sulphurs of Minerals and Metals, and therefore sometime called Anodynes, sometime Narcoticks. Now Anodynes, and especially Narcoticks, do so far forth check and correct the vitious effervescency, and by reason of the encreased Acid, too much, as they do powerfully, though kindly also, dull the very sharp Acid, as well upon the score of the Oil, as of the volatile Salt, that is in *Opium*: But the fixt Sulphurs of Minerals and Metals are much better than Opiates, because they have a kinder operation, and are destitute of a narcotick virtue, causing onely a gentle Sleep, in no wise a Stupidity, be they used in never so large a quantity, which cannot truly be said of Opiates: but these may be added to other Medicines, that are always commended for curing of Agues, as such, and to some, for to mitigate or take away the concomitant Symptoms.

Idem.

XIV. But here a Question seems to arise, Whether blood ought to be let in Agues, as such? since many have urged it, nay, and fly to it, as to the Sheet-anchor, for the right Cure of Fevers, and they think that a right method of Cure has not been used, if letting blood have been neglected. But their Assertion is built on a false foundation, that is, That every Fever consists in Heat in the Heart, and thence too much increased the whole body over. Which although it be observed to have place in most acute and burning Fevers, yet it is not always and universally true, since there do not onely occur Seasons in Agues, but in continual Fevers also, wherein too great Heat is so far from being found in the body, that, on the contrary, Cold does then trouble the Patients, not onely a small one, but oftentimes a most chilling one, tormenting them for several hours: To say nothing now of Fevers that are truly and always chill, and endure continually cold. But because according to their Rule, One Absurdity being granted, a Thousand follow, no wonder if Physicians, building upon this false foundation and principle have here also proceeded amiss in the Cure of their Patients. For although many Aguish persons have been very well after letting blood; yet it does not follow that the same Remedy is good for all; since especially not unfrequent Instances occur of them to whom Bleeding has not onely been useless, but plainly hurtfull. From which double, and indeed contrary Experiment, it can truly and onely be concluded, that taking away Blood does sometimes good and sometimes harm, in the Cure not onely of Agues but of Continual fevers also. Wherefore it concerns Physicians, if they will be accounted Rational, to understand the reason, why diminution of Blood does sometimes good and sometimes harm in the cure of Fevers, that a Rule may be made, when a Physician ought to use Bleeding, and when he should let it alone. That therefore I may conclude something certain in this Question, I doubt not to affirm, since Bleeding administered in Agues has not always done good, but often hurt, that it is not proper for Agues, as such, but that it is convenient and hath hitherto done good onely to certain Symptoms joined to this or that Ague. But a prodigal Lavisher of humane blood will urge, Has not an Ague been by once Bleeding, and taking away a large quantity of blood, cured, and therefore is it not a fit Help and Remedy for curing it? To which I answer, Many slight Diseases are cured of themselves, onely by ordering ones Diet aright, wherefore it is no wonder, when besides evacuation of blood, proper in Plethorick Bodies, a laudable Diet is observed, if an Ague be sometimes cured, which the laudable Diet alone might have cured. And it often cures slight Agues, which consists, 1. In taking of little Food, that easily ferments, and especially liquid, and such as conduces to promote a gentle Sweat. 2. In a little more violent motion

of the Body, and indeed even till the Sweat burst out. 3. In a warm Air, and covering the Body with many clothes to provoke a gentle Sweat. All which things rightly observed, which do not increase Phlegm, that makes or is about to make an obstruction, the obstructing Phlegm is easily dissolved by the pancreatick Juice now become more powerfull, and upon the coming of a gentle Sweat it is driven into the small Guts. No wonder therefore, if sometimes, where the Ague is slight, where there is a *Plethora*, where a laudable Diet is at least in part observed, such an Ague be cured in the beginning, when a Vein is bled. Which Cure is not all owing to the letting of blood, but especially to the alteration following a laudable Diet: Yet I will not deny, but the Cure of this Ague is promoted by the said breathing of a Vein, as often as there is a *Plethora* and Burning Heat accompanying the Fits; for not onely the danger of Suffocation is removed, and of Extinction of the vital heat by too much blood, so filling the Vessels, that there is not room for it, when it is rarefied, to be received into the Heart, especially when it is more than usually rarefied, while the acute febrile Heat continues; but the hurtfull Burning in the Blood also is diminished. And these Dangers are prevented by letting blood in time, and taking away enough of it: Besides, Sweat usually follows upon such evacuation, which is ever good for the Cure of Agues, especially when it is with the refreshment of the Patient, and he can bear it well, and when it agrees with him. Therefore Bleeding seems convenient not of it self, but onely by accident, not always, but onely sometimes, in the Cure of Agues.

Idem.

XV. I said, Sweat was proper for the Cure of an Ague, since it may, yea, ought to be known to all Physicians, that it is an ill sign, whenever no Sweat follows the fit towards the latter end, that is, the declension. For such Agues are usually of long continuance, as, on the contrary, they are usually short where every Paroxysm ends in a Sweat, so that such a Diet be then observed as may not hinder the Sweat nor foment or increase any ill humours in the body. ¶ Scarce any Ague is perfectly finished without a Sweat, and no man in an Ague can well promise himself perfect health who cannot sweat. Want of Transpiration is one of the chief causes of Agues, and may be alone sufficient to cause one, and other causes without this can scarce cause an Ague. But concerning Sudorificks we must take notice, that they be sufficient, and not onely stir the matter, but also drive it out of the body; for unless Patients sweat, after they have taken them, they oftentimes fall into a more violent Ague: And then, that they be not given onely once, but repeated as often as there is occasion; for onely one Sweat cannot always carry off all the matter, but if you stop there, the matter is rather stirred, than perfectly evacuated: And Nature by the repetition of them must be so accustomed to the Work, that of her self she may always void what should be voided, for if they be not rightly given, simple Agues become double. The common People do often, as soon as they perceive an Ague fit come upon them, immediately take a Sweat, which some Physicians do not disapprove, because experience testifies, that Agues beginning may by this means be prevented. Yet, I think, they cannot be given with safety in all bodies, and that they cannot be used aright except in the beginning: for if there be great store of filth in the body, or if the putrefaction and corruption of the humours have gone any thing far, they scarce doe any good; unless we think fit to doe, as *Rulandus* does in his Centuries, and we have a mind to discuss the matter, by several times giving strong Sudorificks.

Sennertus;
de Febr. l. 2.
c. 8.

XVI. Concerning the Cure of Quotidians, Tertians, Quartans, &c. we give this advice, that since

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we ascribe them not to different humours, Phlegm, Bile, &c. as to obstructing Phlegm or the pancreatic Juice variously disposed, we must not have so much regard to the interval of every return, as to the diversity of the concomitant Symptoms, and especially of Heat and Cold: For although, for example, Tertians for the most part come in Summer time, Youth, and especially in Choleric persons, upon which score we may justly have respect to Bile; yet there are not wanting Tertians, which while the Cold is violent, seize old Men and Children, in which Phlegm abounds, in which case if one should have regard to the tempering or purging of Bile, he would be much mistaken; for as a great Heat, the effect of Bile, is observed in most, so in some little or no heat at all is observed, according to the variety of whose being present or absent, the Cure is to be varied. Therefore we must always have regard to all the Humours that any way offend in the Body, seeing they are the cause, why the obstructing Phlegm is more or less sharp, and therefore why the fit varies in all its circumstances and symptoms: For as often as Bile has dominion in the Body, so often will Phlegm be less viscous, and the Pancreatic Juice less sharp, and therefore the Ague will upon this account be cured with greater ease and speed, if so be it be cured aright: But as often as Phlegm shall predominate above the rest of the humours, so often will the Pancreatic Juice and bile be more dull, and so the obstructing Phlegm it self will be more glutinous, wherefore the Ague will be cured more slowly, though easily enough, having all its symptoms commonly more slight: And as often as the redundant Acid exceeds the other humours, so often will the bile be more broken and dull, but then the Phlegm is more glutinous, and especially when the acid inclines to acrimony: Sometimes it is more fluid and ferous, especially when the Acid is sharp, and bile is intimately mixt with the saline part, and together with the more fluid Phlegm makes a salt Serum, but a briny one; wherefore then the Ague will be cured more slowly and difficultly. But after what manner he should proceed, the Reader may gather from what has been said before.

Syvius.

XVII. Specificks for Fevers seem to have place chiefly in Agues: some of them fix the morbid cause, not onely by their Narcotick Sulphur, or, as others will have it, by their Salt, but also they dissolve, and they consist of Opiates: Others by precipitating, they abound in a fixt Salt, and act by stopping fermentation and ebullition, Such are Crabs eyes: Others act by sweating, and when they have raised a sweat, they exert their antifebrile virtue. Some of them are internal, and use to be given an hour or two before the fit, and they doe good especially to Bodies that are not very foul: for unless the source be exhausted by Universals, they may produce abundance of mischief. This is commonly known, Half a drachm of *Cardus Benedictus* Leaves powdered, taken in a little warm Wine. Some antifebrile Specificks act by evacuating, such is that of *Riverius* in the Appendix of his Centuries.

Rolfink.
de Febr.
c. 103.

XVIII. Empirical Remedies that cure Agues, are such as keep off the fit as it is coming, without any evacuation, either taken inwards, or applied outwardly, especially where the Pulse beats, and are chiefly tied to the region of the Heart, the Wrists, or the Soles of the feet. The reason of their effect consists in this, that by the use of them the turgescency and fermentation of the Blood with the febrile matter may be stopt: That is, some Corpuscles or Effluvia are communicated from the Medicine bound about the Vessels to the Blood, which very much fix and bind the particles of it, or by fusing and moving do as it were precipitate it. The spontaneous heat of the Blood is hindered either way, just as when cold water is poured into a boiling Pot, or as when Vinegar or Alum is poured into new Beer, as it is working, the wor-

king presently ceases, and the liquor acquires a new taste and consistency. Things that are taken inward have this tendency, to break off the habit of habitual Paroxysms, which if we obtain, Nature recollects her self, and upon her proper motion easily recovers her former state of health. And although such an Intention be sometimes accomplished by giving a Vomit a little before the fit (for it often stops the febrile motion of the Blood by raising another motion contrary to this) yet this indication may far more certainly be accomplished by such Medicines, as do not at all evacuate from the Bowels, but bring a certain fixation or precipitation of the febrile matter for the time, upon the Blood. Whom I had in my hands to cure, having first given a Vomit or a gentle Purge, about three hours before the fit, I applied Plasters to the Wrists, and at the same time gave them some Febrifuge Powder in generous Wine, and ordered my Patients to be kept in a gentle sweat in Bed. It seldom so fell out, but at the first or second time the Ague was by this means stopt, and by repeating the Remedy a few times, the Disease was perfectly cured. Here something must be said of that famous Febrifuge, the Peruvian Bark, otherwise called *China China*, or the Jesuits Bark. The common way of giving it is, to infuse 2 drachms of the Powder in thin or generous Wine, in a Vessel close stopt for two hours, and then, as the fit is coming, to give the Liquor and the Powder to the Patient as he lies in his Bed. This potion sometimes stops the fit, as it is coming; yet oftentimes this coming after its usual manner, it prevents the next following. But however the fit be stopt at the first, second or third period, and the Disease seem to be cured, it usually returns in twenty or thirty days: And then the Powder being given again, the fit is staved off about the same space of time, and in this manner I have known those that have been troubled with Quartans, who have had but a very few fits all the Autumn and Winter, and so have kept the Enemy at Push of Pike, till the Spring coming on, by the help of the season of the year and Physick, the disposition of the Blood was altered for the better, and so the disease by degrees has vanished. Those who in this manner got truce of their Quartans, went brisk and chearfull about their business; whereas otherwise they grew feeble and pale, and were reduced to a languishing and a vitious habit of body: Scarce one of an hundred tried this remedy in vain. It is not onely given in a Quartan, but in other sorts of Agues, with success. But they that stop Agues with this Medicine onely, seem to give cheating Physick. But the use of this Medicine will be onely proper, when the Patient's strength is too much spent with too great frequency of the fits, and a truce is by this means procured; that Nature may recollect her self, and thenceforth more powerfully oppose the Enemy.

Willis, de
Febr. c. 6.

XIX. *Riverius* called Water impregnated with the Salt of Tartar his *Aqua Febrifuga*. He infused Salt of Tartar, and Spirit of Sulphur with a drachm or two of *Senna*, and sometimes half a drachm of *Jalap*, either in Spring-water onely, or in some appropriate decoction, so he cured all Agues, even Quartans. He also called *Mercurius dulcis*, six times sublimed, *Calomelanos*, which certainly makes a laudable and never a noxious Purge: The dose is to 1 Scruple, whether Refin of *Jalap*, or of *Scammony*, half a scruple, whose Dose may be diminished or increased. And he affirms he never saw any other effect than good from this Medicine in innumerable cases and in all ages.

XX. Beside these things which stop and check the vitious Effervescency by contempering the effervescent sharp things, Anodynes and Narcoticks that abound with Sulphur and Oil, are good, as also are spirituous and watry things: They indeed, while they mitigate both the Sharps (the alkaline and the acid.) These, while they dilute and weaken them both,

both, which I have demonstrated to be true by many experiments more than once. Hence it is that Spirit of Wine it self, and divers waters made with Spirit of Wine, as Juniper-Water, Treacle-Water, &c. are often given to sick persons, before they are taken with the Ague, with good success: But it must be observed that here is need of circumspection, since it is not alike convenient to give any Spirit of Wine to all sorts of People; nor can it well be given to any but to them who are infected with troublesome and grievous Cold. As distilled Vinegar, or other acids, use properly to be given to them who are troubled with grievous heat. And both of them mixt together, to whom both Cold and Heat use to be troublesome.

Sylvius de
le Boë.

XXI. Curative Intentions for Agues, seem (as I think) to be these. 1. The restitution of the Blood to its natural temper. 2. The preventing the depravation of the nutritious juice. 3. The stopping of the febrile fermentation, that a fit do not arise. As to the first, Vomits, Bleeding and Purging are of great use, especially if they be celebrated in the beginning of the Disease. The second Intention is accomplished by an exact course of Diet. The third, by remedies which stop the fermentation of the blood: And although this Remedy be accounted among Physicians Empirical, immethodical and incertain; yet I have often found that Agues have been cured in this manner, when Physick would doe no good, if so be they were used after Physick and Bleeding.

Willis de
Febr. cap. 4.

XXII. Whether at the very time of a cold fit in an Ague, or at any other time, when the Body is all over cold, the Blood be also very cold, I am not able to determine; for I never durst prescribe bleeding at that time, and so could never touch the Blood, as it came out, which they might tell, who make no scruple to let blood at that time. If this should be done, and the blood should then be observed to be cold, I think no prudent Physician would easily proceed to Blood-letting, seeing by it both the heat of the Blood is diminished, and therefore the Cold increased in it, than which nothing is more hurtfull, more ready and able to take away Life: for Life consists in Heat, as Death does in Cold.

Sylvius de
le Boë.

XXIII. If in any Ague whatever, when any concoction, though not perfect, appears in the Urine, you give a Purge on the Ague-day, so as it may have done working before the fit comes, (that is, four or five hours before you think the fit will come) you will find, the Ague will never return any more after that fit, but will be quite removed as by Incantment. I have often tried it, and in most persons the event always answered. In Tertians I doe this after the third or fourth fit, in Quotidians I tarry longer, and in Quartans longest of all, scarce before the thirtieth day.

Petrus Mo-
narius, in
Consult.
Scholtzii.

XXIV. All Physicians take the signs of Crudity and Coction from the Urine; but certainly it is a very fallacious conjecture that is taken from thence: for the cause of Agues is not in the greater Veins, in which, as also in the Reins and Bladder, Urines get their Concoction, but in the first Region of the Body: for bad Urines in Agues signifie, that much excrements creep out of the first Region of the Body into the greater Veins in the fit, which corrupt the Blood, whence a change of the Ague into a Continual fever may be feared, upon the removal of the Humour out of the first Region of the Body into the greater Veins. But they do not at all shew, how crude or concocted the humour is, which is lodged in the Mesentery, Gall, Bladder, Liver and Spleen. Now oftentimes at the second or third fit the Urine seems very much tinged, when a bilious corruption creeps out of the first Seats into the Veins, upon which many contend, that bleeding in that case is very necessary, as if the fired Blood required to be quenched with this Remedy, when notwithstan-

ding it rather points out the purging of bile by stool, and the opening of Obstructions. For neither, when Blood is taken away, is the source of the Disease purged, nor is the heat of the raging bile therein quenched. But on the contrary, unless there be a *Plethora*, which it is best to cure by emptying the larger vessels, there will be an attraction of the cholerick, excrementitious humour into them out of the first Region, upon which there is a change of an Ague into a Continual Fever. Therefore croceous and red, or crude, or otherwise bad Urines in Agues, shew, that there is so much excrementitious humour in the first ways, that a great share of it is poured into the Veins and the rest of the Body, which unless it be evacuated by repeated Purging, there is fear that an Ague may become a Continual fever, or last a long time.

Enchir. Med.
pract.

XXV. It is a received opinion among some of the Arabians, that bleeding in Agues should either be wholly omitted, or celebrated in the process of the Disease. But we know from innumerable instances, that this opinion is not so proper for curing Agues: for we have experienced by many years practice, that all they, who let Blood before the third fit in Tertians, were soon freed from their Ague-fits: but that they who used the Remedy after this time, found benefit more slowly by it. Nor is there reason wanting; for if there be a *Plethora*, which is seldom wanting in the Bodies of our Country-Men, all things are made worse by delay and neglect of Evacuation. But because in Agues all the vitious matter resides without the greater Veins (as some will have it) truly I doubt whether it agree with all things, which evidently appear in Agues.

Jac. Oerth-
us apud
Schenckium.

XXVI. It is to be observed, that we may flee to Antimonial and Mercurial Medicines in all Agues of long continuance, for as the matter lies in several places, so especially in the Mesentery, whence unless it be fetched by one of the said Medicines, you will scarce ever rightly expell it, except in a long time.

Hartman.

XXVII. It were incredible to tell, how great a power of Diseases follows for want of purging after autumnal Agues. Therefore when the Disease is cured, the Patient must be carefully purged: For whenever I found an elderly person had had a Tertian or a Quartan, and neglected Purging, I could certainly foretell, that some dangerous Disease would afterwards seize them, of which notwithstanding they did not at all dream, as if they had been perfectly cured.

Sydenham.

XXVIII. A certain Carman cured several, that had been long sick of Agues, or otherwise indisposed, by giving them a draught of Wine, wherein he had first dissolved an handful of Salt. They that drank it purged upwards and downwards with great violence. Some that had been troubled with a tedious Head-ach, and bastard Tertians, after they had had them for a long time, recovered by this means. But several others, to whom this Medicine was given unseasonably, or that were very weak, were most grievously hurt by it, yea, and some died.

Erastus,
Quæst. de
Purgat.

XXIX. Since natural sleep is nought in the beginning of Ague fits, whether may we say the same of it, caused by art? A certain friend affirms that many Agues have been removed by the help of *Laudanum Opiatum*, after due preparation and purging, with *Tartarum Vitriolatum*, Extract of Hellebore, *Antimonium Diaphoreticum*, &c. Which effect he judges, does not want its reason: For seeing, saith he, in all Agues, that continue pertinaciously, there is some putrefied infection which is left in the focus after every fit, and which ferments upon the coming of a new fit, with fluxion either through the Veins, or through the whole, it so falls out, that if the Alexipyretick *Laudanum* be given 2 or 3 hours before the coming of the fit, all the heat will be then mitigated, the fermentation of the humours stoppt, and

fluxions

Gr. Horstius,
probl. deced.
1. 245f. 6.

Abr. Scyller,
apud Schol.
tium, Ep. 3.

fluxions into all parts restrained, and so the Ague with the spreading of it wholly intercepted. Perhaps, that passage found in Petronius may be to this purpose, where Quartilla says, Truly I was so tormented that night, and shaked with cold so dangerously, that I feared a fit of a Tertian, and therefore I sought a Medicine for sleep. ¶ If the Disease retire not upon purging, I should certainly give Philonium before the fit: This will not onely be convenient to drive away a bastard Tertian, but also to assuage pain. ¶ That Hippocrates used Narcoticks in a Quartan, to check the motion of the humours, and hinder the dispersing of them, which is the proximate cause of an Ague, is evident from lib. 2. de morb. Sect. 2. vers. 206. Of Henbane seed the quantity of a Mithridate, and as much of Mandrake, and of juice of Silphium the quantity of 3 Beans in Wine, &c. ¶ Platerus gave Syrup of Poppy to one in an Ague before the fit. Obser. l. 2. p. 173.

Februm Symptomata, or, Symptomes of Fevers.

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I. A Noble-man being taken with a most violent Burning fever, asked an old Woman, that was by, to bring him a Pail full of cold water, which being done, he dipt his hands into the water, and when he found that the raging of the heat was allayed and extinguished by it, he held them in longer, at length when he drew them out, a livid Blackness had disfigured both of them with privation of sense: Earnest endeavours were used to recall the native heat, but all to no purpose, for the pleasure of his refreshment he lost both his Life and Fingers. ¶ A Woman, not being able to quench the heat of a Burning fever by drinking, washed her mouth with cold water so lavishly and frequently, that no warning was sufficient to deter her from this most gratefull Cooling. But the veins and arteries of her Palate and Throat being straitned by this adventitious Cold, and the vapours inspissated, and so the Spirits that endeavoured to go to the Brain, being suppressed, her Understanding not onely failed her, but with contracted Nerves also she fell at length into inevitable Death.

II. Some hold, that we must never let blood or purge in a Fever or Loosness, though the vacuation be not proportionable to the abundance. Others say, that there is room for either Remedy, if Nature move not perfectly. Each Sect errs, departing from Galen's fundamentals: because whether Nature moves perfectly or no, it may so happen, that they may sometimes be convenient, and sometimes not: The reason is, the Indicantia may sometimes indicate more than the Prohibitentia prohibit; sometimes the Prohibitentia may prohibit more than the Indicantia do indicate. For example; Let a man be taken with a Fever and Loosness, and suppose there be danger of his strength failing, by reason of the Loosness, without doubt we must then have most regard to the strength: But if this Fever were very malignant, and the Loosness not proportionable to the abundance, then if there were any fear lest the malignity should furiously run to the Heart or Brain, with certain danger of death, then undoubtedly the furious malignity would be more urgent, than the fear of the strength's failing through the Physick or Bleeding: In which case, if it be true that we must have most regard to that which is most urgent, we must be forced to use both remedies. ¶ When a Loosness attends an Ague, many are abhorrent from Purging; but this is so far from dissuading a Purge, that it intimates it should be hastened; for it is either crude and lienterick, or choleric, or bloody: The crude persuades to drink sparingly, and requires Rheubarb, by which the crude humours being cleansed, and the Stomach strengthened, the flux will easily cease: The bloody requires likewise the use of Rheubarb, that the sharp and fretting bile, corroding the Intestines, may be purged away: a choleric one, whether it be caused symptomatically through the multitude and agitation of the humours, or by the strength of Nature forcing it, requires vacuation made

Horstius,
l. 2. obs. 23.

Tulpius, l. 4.
4. obs. 20.

Sanctorius,
meth. vivand.
err. l. 15.
c. 12.

P. Pacheco
quæst. 45f. 4.
in Rheubarbo

Enchir. Med. præd. made by Art, that, part of the Load being subtracted, Nature may more easily concoct the rest.

III. Prudence is necessary in stopping a Loosness, coming upon a Pestilential fever. If it be stopp'd preposterously, the Poisonous matter is kept in, casts down the strength, and destroys the Patient. We must proceed thus; If it be so moderate, that it do not spend the strength, it must not be stopp'd, but onely moderated with strengthning Clysters: If it be immoderate, and spend the strength much, it uses to be colliquative, and may be stopp'd boldly; which, half a drachm of new Treacle, or 1 or 2 grains of *Laudanum opiatum*, will do effectually. I have often observed a pernicious flux of the Belly, in which the Patient seem'd running to his destruction, to have been stopp'd, as it were in a moment, by giving powerfull Diaphoreticks in a large dose: The Poision, to wit, being expelled, which, by vellicating the Intestines and other Bowels, caus'd that wasting flux.

Riverius.

IV. A flux of the Belly, if it happen immediately upon the beginning of the Disease, seems therefore to be stopp'd, because at that time it comes rather from the violence of the Disease, than from the strength of Nature, acting regularly, hence it is necessary, that upon it trouble and loss of strength do follow; for of whatever fluxes Nature by it self is the Authour, they come not in the beginning, but after the crisis of a Disease. Therefore it is expedient to strengthen Nature, oppress'd by the violence of the Disease, with a Diet thicker than the sharpness of the Disease requires; for this must be indulg'd the Symptome. As, suppose *Socrates* were sick of a Burning fever with a Loosness, you must not keep him with Drink alone (which Diet it otherwise does require) but with supping of Creme of Ptilian, *Hippocrates* so advising, *lib. 4. de Vict. Acut.* where he treats of another Burning fever. Thus therefore it is manifest from *Hippocrates* and *Galen*, that in whatever Fevers the Belly is loose at the beginning, the Feverish persons must be kept with a thicker diet, than the acuteness of the Disease requires; for, for the most part such fluxes of the Belly happening in the beginning of a Disease, if they continue, waste and consume the Body; wherefore they are signs and effects of Colliquative Fevers.

Brudus de Viâ, Febr. c. 39.

V. They that are sick of Cholerick and Malignant Agues, especially of a double Tertian, do, upon the return of the Fit, fall into a Cholera, through the abundance of mad Cholerick matter, whose violence, if you do not stop, the Patient dies within 2 or 3 Fits. One was recovered from the jaws of Death by the help of these things; That I might prevent the next day's storm, I order'd him to be refresh'd with thick Panado's and Gelly Broths, that a check might be given to the rage of the humours the next day. I prescribed Epithemes and Electuaries of Conserve of Roses, Bugloss, Borage, preserved Myrobalanes, Pearl: But three hours before the Fit I order'd this admirable Clyster to be given, without which, if I am not mistaken, there had been an end of the Patient; Take of Red Roses 1 handfull, boil them in Broth made of a Wether's Head and Feet. In one pound of it strain'd dissolve of new Venice-Treacle 2 drachms, 1 Yelk of an Egg. Make a Clyster. Which he kept till the return of the Fit, which brought his Loosness again, but much less than it was. And by insisting on this method, I have saved several that were given over for lost.

P. Pacheco, obs. 4. in River. obs.

VI. If in the course of this Disease you find a Loosness arise, which uses to come when the opportunity of giving a Vomit is omitted; I say, in this case, it is convenient to give a Vomit at any time of the Disease (except the strength indicates the contrary) although the propensity to Vomit be long since past. But because I have done with this before, I will here subjoyn what is needfull to be

done, if, although a Vomit have been given, a Loosness do nevertheless follow: Which yet is rare; unless in a Symptomack fever, where a Vomit does not onely not hinder this Symptome, but sometime creates it. In this case this Clyster did good above any Astringents; Take of Pomegranate-rind half an ounce, Red Roses 2 Pugils, boil them in a sufficient quantity of Cow's Milk, in half a pound of it strain'd dissolve 3 drachms of *Diaecordium*. I would not perswade you to give a larger quantity, and so make the Loosness greater, which you had a mind to stop. You will object, It seems more to the purpose, especially when the Disease declines; rather to suffer a Loosness than to stop it, seeing sometimes it is critical, and puts an end to the disease. I Answer, I will not deny, but that sometimes a Fever makes way for it self, and flies out at this Port; but this happens so seldom, that our hopes should not depend upon it; And now I must add this, that the Secretion of certain parts, which is done by the excrement, is not onely necessary for the genuine depuration of the Blood; but it is required also, that other parts be separated, as Flowers, a thing which we daily see in other rich and heterogeneous Liquours. Therefore, if you indulge the Loosness too much, you will procure onely half that depuration, which is so much desired, and also that perhaps may be voided first, which should have been rejected in the last place. I confess indeed, that when this Separation by Flowers is already made (which is usually done gradually and insensibly, for the most part, by a little more ample Transpiration, rather than by manifest Sweat) a Loosness, if it should chance to come, would portend no great danger. Yet we must know, that it does not come for any other reason, but because a Purge, designed to discharge the excrements, was not administr'd in season, by which stay of theirs indeed the Excrements, having got the mode of some malignant ferment, do then irritate and stimulate the Guts to Excretion; that I may not say, that the very liquid consistency of the excrements (for they are for the most part seen in such a form) does sufficiently indicate, that they must not be esteem'd a critical solution of the Disease.

Sydenham.

VII. It will not be much out of the way, to relate the cure of a Woman, who was taken with a Burning fever, her Belly was always loose, she got no sleep, and she had an immoderate heat in her Stomach: Her stools did not extinguish the febrile heat. Some advis'd her to drink Barley-water onely; for they judg'd, the acuteness of the disease did not require a thicker Diet: Others would have it better, to bridle the violence of the disease with Medicines: Others thought, the immoderate flux of the Belly was to be stopp'd with astringents, for this reason, because the Patient found no relief from it: But indeed my opinion prevail'd, that the Loosness should neither be stopp'd by Astringents, nor that there was then any occasion for Medicines, and that they could use no remedy, that was more seasonable, than to strengthen the Patient's Nature with a thicker Diet than was suitable to the Disease; since by this means she might with less inconvenience bear the Symptome of a loose Belly. Wherefore I kept the Woman, for some days, with thick Chicken-broth tempered with convenient Herbs, and used no other remedy. So indeed she escap'd an acute disease, onely by an agreeable Diet. Whence I gathered, that in an acute Fever, with an immoderate flux of the Belly, it is the wholesomest thing for the Physician onely to take care, that he strengthen nature with a thick Diet.

Brudus de Viâ Febr.

VIII. But then it ought to be consider'd, when we must use astringent Meat and Drink. In acute Fevers we do by all means endeavour to drive the efficient cause of the disease out of the Body, and when

when any evacuation happens spontaneously, although it be made unseasonably, it must not be stopt for this reason, because it is to be suspected, that some share of the noxious superabundant humour is voided. Although we know for certain, that in these unseasonable Loosnesses, much of that which is usefull and convenient for Nature is evacuated, we must not for that reason stop the Loosness; for a greater inconvenience usually follows upon the retention of an ill humour, the Fever increasing, and its Symptoms therefore increasing, which devour the strength, than the Damage of the weakness is, which they that go the contrary way to work, might fear; Wherefore, taking care for the Fever, and its Symptoms, we provide for the strength by a thick Diet. Yet it is to be understood, that we give cooling and thick Broths onely in such a flux as is caused by Colliquative Fevers, and Drink that participates of an astringent faculty, more to withstand the Colliquation, than to stop the Flux: For it is not advisable to keep in the Body, what is already dissolved from the parts, by the violent burning of the Fever. For this reason, *Hippocrates*, when in *lib. de rat. viſſ.* he had mentioned Loosnesses in Fevers in several places, makes onely once mention of an astringent Drink and Broth, of a thick confidence; to wit, when the Belly is loose and colliquative; *It seems to me, saith he, that cooling and thick Broths should be given, and vinous Drinks, which may stop, or even more astringent ones.* But in the rest he sometimes advises to give a Purge, so far is he from perswading Men to stop those fluxes.

Idem.

IX. But we must know, that all Loosnesses come from two causes, namely, from the hurt, either of the expulsive, or of the retentive faculty. When it is caused by the irritation of the expulsive, it is not safe to stop the flux with Astringents, especially in acute Diseases: But when it comes from the weakness of the Retentive, it must be stopt with Astringent meats and drinks, in every Fever and in every Disease. Therefore in Colliquative fevers, by reason that the Colliquation argues weakness of the Retentive faculty, more than any strength or irritation of the expulsive; *Hippocrates* does not without reason order Men to give thick and cooling Broths, and Vinous and Astringent Drink, which may bind. Therefore, in what diseases soever the Belly is loose, through the weakness of the retentive faculty, we must use Astringent meat and drink in them, taking our indication rather from the Symptome than from the Disease.

Idem.

X. People in Fevers sometimes labour under a dejection of Appetite, so that their Bodies wither with an Atrophy. And seeing it has manifold causes, no Meat can simply be commended to restore it. Not onely the intemperature of the mouth of the Stomach dejects it, but also whatever humour it is, which dulls the sense of the mouth of the Stomach, or hinders the contraction of its parts. Now the Intemperature is for the most part hot, with either contrariety, dry and moist, joined with an humour, and without any. When Heat and Moisture are the Cause, Capers with Vinegar, Pickled Olives, and Broth of Lentils are good: But when Heat is joined with driness, cold Water does most good, unless something prohibit it, Lettuce, Gourds, Melons, &c. which is the reason, why in Summer-time we use them at the beginning of a Meal, that so we may repress the Heat and Driness of the Stomach, after which we find we have better Stomachs to our Victuals. The Appetite is also dejected, for want of contraction of the parts of the Stomach: This is a disposition contrary to it, which some call Remollition, or Relaxation of the Stomach; it has its rise from a phlegmatick humour, that has long hung about the Stomach, and moistened its Coats, which *Galen* mentions *m. m.* where he allows drinking of Wormwood for a Medicine for

this Ail. This Relaxation renders the superficies of the Stomach smooth, whereby it dejects the appetite; for the appetite is a Sense of some exasperating thing, or arises from it; Wherefore Wormwood may be rightly said to procure an Appetite: for by its driness it corrects a lax Stomach, by its bitterness and astringency, it makes the smooth superficies rough. Wherefore when the Appetite is decayed through relaxation of the Stomach, we must use Wormwood. Salt-fish also is very effectual to this purpose.

Sometimes also it comes to pass, that a crude humour sticking long to the Coats of the Stomach, causes Loathing: Whatever things therefore have a faculty of voiding this, and making the Stomach rough, are properly said to raise an Appetite, by reason, that for the most part Loathing of Food arises from the said cause. Among hot things, Garlick and Onions are such: for Garlick has an excretive faculty, it bites and dries the Stomach, according to *Dioscorides*: And whereas it is said that Garlick is windy, and causes Loathing, it is frivolous; for we find by daily experience, that it is no slight remedy for wind, and that it procures a Stomach, and *Galen* *de rat. viſſ.* is of the same mind. Whoever therefore have a loathsomeness to their Victuals, by reason of crude humours long sticking to the Stomach, they may with good effect use Garlick steeped in the juice of sowre Grapes, or of Sorrel. And there is likewise a cleansing faculty in Onions, according to *Dioscorides*, and they bite the Stomach, for which reason they raise an Appetite: Whoever therefore through want of exercise, or a weak expulsive faculty, have a drowsie sense in the mouth of their Stomach, and upon that occasion loath their victuals, they may beneficially use raw Onions cut into thin slices with Water, Salt and Pepper. Mustard also bruised, with Vinegar and Bread, renders the sense of the Stomach more acute. Parsley boiled with Meat, raises an appetite, without any action, that is taken from the manifest qualities: It is also admirably good, beaten with Vinegar and Bread.

Idem.

XI. One of the *Arabians* writes thus; Among those things that are good for them, who have lost their appetite through weakness, as in people upon recovery from sickness, or by reason of a moist viscous matter, this is one, to eat Olives and some Salt-fish. But as Olives are hurtfull to them, whose Bellies abound with a moist viscous humour, so is Salt-fish for people upon recovery, who loath Meat because of their weakness: for according to the opinion of that Physician, their Appetite is lost for want of blood, as (saith he) it happens to those that are upon recovery, or to those that are evacuated with a great evacuation: I think the use of Salt-fish would rather be an Inconvenience than a benefit to either, when they loath food: But neither do pickled-Olives make them any better.

Idem.

XII. To keep off the Anguish, *Aretaeus* gave washt-Bread, sprinkled with cold juice of unripe Grapes, before the Fit. ¶ But *Trallianus* his experiment seems to me something rash, who, an hour before the Fit, gave Pumpions, made very cold, to be eaten, then presently gave them store of cold Water to drink, and so frequently prevented the Fit, while some fell into a sweat, and others voided great store of choler by stool.

Fortis.

XIII. I derive the Head-ach, which is sometime very violent, during the Febrile heat, especially from a salt lixivious acrimony; hence I have observed, that it gives way chiefly to Emulsions, which are often commended by use, and which I know are very proper to temper any, but especially a Salt Acrimony: Yet here not onely Anodynes but Narcoticks also are convenient.

Sylvius de le Boë.

XIV. One had a *Hemitriticus* Ague, with a most violent Head-ach, and that a continual one, he was four times let blood in the Arms to no purpose: But

Riverius,
cent. 3. obs.
40.

But it was taken away in an hour's time, by letting blood in the right-ankle, in the end of the sixth day. Here young Practitioners may see, how good the revulsion from the head is, by opening the Saphena's.

XV. The Heart-burn is two-fold, one, which is caused by the *ichor* of the blood gathered in the Veins, when it used otherwise to be evacuated by the Hæmorrhoids; of which, *Galen* 1. *Prorrhæti*. Sect. 3. *Aph.* 38. Another, which is caused by an humour, and especially a choleric one, which he, 1 *ad Glauco.* 14. writes, is sometimes poisonous. Which division holding good, I say, that although upon the account of the Fever a Vein should be bled, nevertheless we must first abate the Heart-burn; for where it is, and it is caused by bile, there is neither an indicant nor a permissent, for it is not caused by blood, and strength is low: Moreover, there would be an attraction of the sharp humours that are in the Stomach, to the Veins, whence would come a greater mischief. But if the Heart-burn come from an *ichor* in the blood, although upon that score there be an Indicant, yet there wants a permissent: for in every Heart-burn the strength is weak, seeing there is pain, to which a dolorick quality, which is very troublesome, is joined, so that hence a cardiack *Syncope* often arises. But because the *ichor* of the blood, which used to be purged by the hæmorrhoids, is retained, therefore in a Fever with this Symptom, from such a cause, it will not be inconvenient to open the Hæmorrhoid Veins: for Blood taken away by them, weakens not so much. But when the Heart-burn ceases, and the Fever still continues, and requires breathing of a Vein, if any one ask, Whether we may let blood? I say, that if the Heart-burn, its cause being extirpated, be at an end, without doubt, upon the account of the Fever, if the strength will allow it, a Vein may be opened: But if the Heart-burn cease, and the Physician be not certain whether it may not revive again, he ought to go warily to work, and rather abstain from it, because he doubts the cause lies there still. Hence it appears, that a Physician's dexterity is requisite in this case: for although it be made use of, while the strength is good, yet the Patients, for the greater part, are afterwards destroyed, or scarce come to themselves again; the Heart-burn coming again at last, as I have often observed. But I always abstain from blood-letting, and the cure succeeds well.

Claudius
Resporf. 9.

XVI. When grievous Pains exercise the sick, when restlessness from the agitation of the humours is observed in them, prudent Physicians use to have recourse to Opiates and Narcoticks, as to their Sheet-Anchor; which is done, inasmuch as all Narcoticks and Anodynes abound in Sulphur, whose property it is to qualify every sharp, as well acid as lixivious, a thing which may be made good by infinite Medical instances. Hence it is, at least in my judgment, that Narcoticks and Opiates, Treacle, Mithridate, *Diascordium*, &c. given in the beginning of Agues, that arise from a vitious effervescency, diminish, check, and sometimes stop the violence of the Ague, which even the common people know.

Sylvius de le
Boë.

XVII. We have shewn, that Vapours and Wind may be produced by humours in the small Guts, upon the meeting of the Pancreatick juice, choler and phlegm, but more plentifully and noxiously in the beginning of Ague-fits, and when they are in the increase, yea, at the height: Although, according to these various times, various vapours and wind use to arise, according as this or that humour has the predominance, which is well known to them that attend to the complaints of the sick, and observe their circumstances often differing very much among themselves. For when the Fit begins, and the Cold is violent, the vapours that are carried up, use to be more austere, acid and glutinous, whereas they

which are every way dispersed, when the heat begins, are more subtle and furious, and increase the eruption of sweat, till the going of it off. Wherefore each of them must be discussed with a several Medicine: For whereas when the Cold begins, and as long as it lasts, Volatile Salts, and Aromatick Oils, and in particular, Oil of Cloves, are good; So when the heat is violent, Spirit of Nitre should be preferred, as well pure, as the sweet, mixt with drink, whereby at the same time, Sweat, withheld for by Aguish persons, is promoted, and ends the Disease, if it be not too much, and spend the strength. And when there is fear of such Vapours, because the like have been observed already in the preceding paroxysms, it is good, a long time before the coming of the Fit, to take a small quantity of those Medicines for correcting and discussing them, which must therefore be most proper for preventing them. By means whereof, I have observed, Patients grew always better, and by little and little overcame unexpressible Anxieties.

XVIII. So it is sometimes, that bleeding at the Nose does follow, either because over-hot Medicines have been given at the beginning of the Disease, or because the ebullition has not been sufficiently restrained, that is, either when the Patient is in the flower of his Age, or the season of the year helps towards it. If it be thus, things that are commonly used to stop the motion of the blood, will little avail. Letting of blood, Ligatures, Astringent Medicines, Agglutinants, things that temper the acrimony of the Blood, &c. For although, according to the skill and prudence of the Physician, one may use this or the other of them; yet the whole stress of the affair lies on this, to give a check to the ebullition of the Blood by some proper Medicine, which may stop and compose its violence. It is true indeed, if the Symptom may be kept apart, the means we have enumerated may be proper enough, especially Blood-letting, nor should I scruple to use them; but certainly they do not sufficiently reach (if you onely except Blood-letting) the cause of this Symptom, which indeed you can with no more reason endeavour to take away by the aforesaid things, than if you should offer to put out the fire with a Sword. Therefore in this case, when other things have been tried in vain, I am wont to use some such thing as this; Take of Water of Purlain, Red Poppy, each 1 ounce and an half, *Syrupus de Mætonio* 5 drachms, Syrup of Cowslip Flowers half an ounce. Mix them, make a draught. But I would not have these things so understood, as though I would have every Hæmorrhage thus immediately cured, because oftentimes it must rather be let alone, and it may do the Patient much good, partly by repressing too great Ebullition, and partly sometimes by critically putting an end to the disease. And indeed it will little avail to give the aforesaid check to this Symptom, before it have run out for a little time, or also before a Vein have been opened in the Arm. And we must diligently observe this, that this, and all other immoderate Hæmorrhagies have this peculiar to them, that as soon as they are in any measure stopt, unless some gentle Purge be given, there is fear that the Patient will suffer a Relapse, and therefore we must Purge, although (if the times of the Fever be considered) it uses to be given something later, and ought so, but that this Symptom happened.

Sydenham.

XIX. It often happens that Dropsies do follow, when a Man is not carefully Purged after Autumnal Agues; But they are easily cured when the disease is new, by means of Aperients and Catharticks. Nor am I concerned, when I hear and perceive that the disease arose hence: for then I conceive hopes of a good issue of the affair: for I have cured some by the use of the following Apozeme, even without mixing any thing more appropriate to the Dropsie; Take of the Root of Monk's Rheubarb

2 ounces,

2 ounces, Roots of *Asparagus*, Butcher's Broom, Parsley, and Polypody of the Oak, each 1 ounce, the middle rind of Ash, of Tamarisk each half an ounce, Leaves of Agrimony, *Ceterach*, and Maiden-hair each 1 handfull, clean *Senna* 3 ounces, besprinkled with 1 ounce and an half of the best White-wine, Trochiscs of Agarick 2 drachms, Fenil-seeds 4 scruples. Boil them in Spring-water to 1 pound and an half. In the Colature dissolve of Syrup of Cichory with Rheubarb, and *Magistralis ad Melancholiam* 1 ounce and an half. The Dose half a pound, every morning for three days; And let it be repeated as often as there shall be occasion.

Idem,

XX. Blackness and driness of Tongue is a frequent Symptom of Burning fevers, with a violent inflammation; because, that an immoderate febrile heat, together with sharp vapours, exhales, and is most readily received into the spongy substance of the Tongue, on which, defluxions concurring, it brings roughness and blackness. They of *Austria* and *Hungary*, where such Symptoms of the Jaws do very often occur, by reason of the frequency of most violent Burning fevers, dissolve Trochiscs of Nitre, prepared with Flowers of Sulphur, in water, as a singular and specific remedy, which they do not only drink plentifully, to quench the febrile heat; but they use it also in form of a Gargarism, to correct the roughness and blackness of the Tongue, not because of a certain Elementary frigidity, coagulating things heterogeneous with homogeneous, which cannot be supposed in this place; but because of an Armoniack and Vitriolate Acidity, which is able to dissolve Bodies, and restrain and coagulate the ferocious Spirits, which may easily be demonstrated from the preparation of *Mercury*, and other changes of natural things. The vulgar preparation of *Sal Prunelle* with Sulphur (as *S. Clossius* observes) may suffice for the *Prunella*, and other outward Ails: but it is not so good for inward uses and Burning fevers, contrary to their opinion, who contend, that Salt-petre is then finely prepared for Medicine, that is, if it be burnt four times at least with Sulphur, and as often filtered and coagulated: For they say, there are crude Spirits in it, which, unless they exhale, and be dissipated, will do no small harm to the Stomach. But these Men do not take notice, that the whole substance of the Petre-Stone abounds with these firm and pontick Spirits, which, if they call crude, I will not much gainsay them: But they are so far from being corrected by this detonation, that the parts more subtle, and fitter for cooling, fly away with the Sulphur into the Air, and if this conflagration last long, nothing else at length will remain, but a bitter, fixt and porous Salt, endued with a heating and drying quality, a thing which it will not be difficult for them to divine, who have learned to get out the Spirit of this Chymical *Cerberus* by injection of Particles of Sulphur. Therefore all the skill lies in purging of this Salt, and in the right way of giving of it. Take therefore a sufficient quantity of the purest Salt-Petre, melt it in a crucible in a moderate fire: Afterwards cast it into a good quantity of common Barber's Ly (but however let it be hot, otherwise it would sile in your face) let it dissolve in it, filtre and evaporate it half away; then set it in a cold place, and most pure Crystals will be gathered at the bottom, which in goodness and fineness far excell the second and third that will follow; separate them, and then dissolve them in Rose-water: On the other hand also, dissolve as much Sugar in some Cordial-water, or in the same; mix these Solutions, and boil them according to Art, that the Crystals may be gathered in a Cellar, the use of which will be about half a drachm, or 2 scruples in Ptisan, or Pectoral Decoction, for so they escape the sense of the Palate. Otherwise, if you give Mineral Crystal in distilled-waters, you will find an Urinous and

biting Taste, which will create trouble to the Stomach. G. Hortius in Prob.

XXI. I never advised any one to Bleed under the Tongue, though Barber-Chirurgeons sometimes persuade to it. And what this can doe, especially when there is no Quinsy, but onely the Tongue rough and black, through heat in the Bowels, I do not see. Let the heat in the Bowels be taken away, this Symptom will easily cease. Sennertus, Ep. 28. cent. 1. Yet *Franc. de le Boë Sylvius* admits it. *Prax. l. 1. c. 30.* A Fever, saith he, accompanied with a purple-black colour, and a dry heat in the Tongue and Jaws, will be cured, if besides univerials, convenient for such a high Burning fever, those things in particular be used, which have been observed to doe good to this heat, driness and ill colour of the parts of the mouth, among which Gargarisms are especially commended, of a decoction of Self-heal (which had its name *Prunella*, as they say, from curing this disease, which is called by the same name.) Opening the Veins under the Tongue is good also, and especially when they are observed to swell, and yield some sign of a Quinsy at hand, or there already: for it is no new thing for a Quinsy to be joined with this Symptom.

XXII. Cold water is a thing, which conquers thirst most of all others. In the second place is Barley-water: In the third is Syrup of Violets diluted with store of Water. Our Moderns often use Water and Sugar: But we ought diligently to consider, that we may not use it, nor any Absterfive, in an exceeding driness of the Tongue, or of the whole Body; for such things make the Body drier, as experience hath formerly taught me. In *England* I visited a *Spanish* Boy of a thin and exceeding squalid habit of Body. His Tongue was beyond measure rough and dry, so that he could scarce speak, and he had an insatiable thirst. I thought good to give this Boy cold water, and I put some Sugar in it, to correct the grossness of the water: And when his thirst was not abated by drinking cold water, I attributing it to the fault of the water, gave him distilled Bugloss-water, because there could be nothing gross in it, with Sugar; and when upon plentiful and frequent drinking of it, he still grew drier, at length I understood, that in an exceeding driness, things which have an absterfive faculty, are not proper, because they render the body and humours drier. For to make use of absterfives onely, is just as if you should laboriously rub foul Linen with Soap without Water, to get the dirt out; for the more Soap you use, the less good you will doe, and you will onely rub the filth more in; for you should first steep your Linen in Water, that the filth, which you would get out, may be moistened: So Women first suffer their Linen to be steeped long in Water, use shewing them the way. When therefore Mens bodies are very much parched, Abstergents must be avoided, for then the humours are not to be cleansed, but rather to be moistened; yet when you have made them moist enough, you may securely use Absterfives, as *Hippocrates*, lib. 1. de *vict. Acut. instruit* us; The quantity of Broth to be given must be observed in this manner, to wit, if the Disease be drier than one would think, we must not give much, but give Water and Honey, or Wine before the Broth, as shall be most convenient. *Galen*, in his Exposition, recounting the signs, by which we may know a dry Disease, writes thus; And truly, saith *Brudus de* he, to void none of the Superfluities, is a sign of a dry Disease: Therefore *Hippocrates* does not without reason order vict. Febr. c. 28. some moistning thing to be taken before Ptisan.

XXIII. And not onely Abstergents must be avoided in such a Disposition, but also all manner of Meat and Broth. For we must use onely moistning drink for them, whose Tongue and whole Body are beyond measure dry. Because if you should give them Broth, part of the Broth, which is of a thicker substance, sticking to the coats of the Stomach,

mach, because of their exceeding driness, would be rather burnt by the febrile heat, than concocted; just as Meat sticking to the pot is burnt, when it wants moisture. And this was Hippocrates his mind in the place before quoted; where he orders Patients to drink Honey and Water; or Wine before their Broth; when the Disease is beyond measure dry. Meaning, that in such a Disease, the Sick must be first nourished with moistning Drink; till the driness be over; and then they may proceed to Broths.

Idem.

XXIV. But I know this for certain, that the driness which comes upon the Tongue, and the whole Body from the quality of Burning Choler, is much stronger than that which proceeds onely from the thickness of the humours. Wherefore it was well remembered above (Paragraph. XXII.) that Water and Sugar must be avoided; and all Abstersives; and that moistning Drink must onely be used.

Idem.

XXV. It happens sometimes, especially in old Men, when the Fever is cured, and the Body has been sufficiently purged; that the Patient notwithstanding is very weak; and expectorates great store of glutinous and viscous Phlegm; sometimes by coughing, and sometimes by hawking: Which Symptome not onely strikes terror into the Patient, but has imposed on the Physician also; especially the less wary, and made him believe, as if this affection were the fore-runner of a Consumption, although I have observed the thing is not so dangerous. In this also I order the Patient to drink old Malaga, Canary or Muscadell Wine with a Taste, which strengthens the Crasis of the blood; much weakened with the foregoing astuation (and therefore unable to assimilate the Juice of what is lately taken) and it drives away this Symptome in a very few days time, as I have found by frequent experience.

Sydenham.

XXVI. If the Patient, either by taking hot Medicines either unsuccessfully or unseasonably, or being of too hot a Constitution by nature, fall into a Phrensie, we must look back to the Disease and Symptome, which may be done by giving some Narcotick in a larger Dose: For although when the Fever is strong, things that have a narcotick faculty be not altogether so proper, and do not obtain the end the Physician drives at, yet given seasonably and in the declension of the Disease, they yield excellent Effects; but, before, they can doe no good; partly, because they cannot stop the fermentation running on with violence and impetuosity, though given in never so great a Dose; and partly, because by using this Medicine, a stay is given to the peccant matter, at that time equably mixt with the mass of blood, and not as then inclining towards separation, and then Depuration, so much desired, is hindered. And therefore I declare it as a thing most certain, that Laudanum, or any other Narcoticks, given to ease this Symptome, either in the beginning, increase or state of the Disease, either doe no good at all, or, as it often falls out, doe much harm; but if they be given but in a moderate Dose in the declension of the same Disease, they have good success. Once indeed I gave a Narcotick on the twelfth day of the Disease, and not in vain; but sooner I never knew it given with success. But if you defer the giving it till the fourteenth day, it will doe the more good, because separation is then perfectly made. Nor does this delay, although perhaps this Symptome may terrifie the By-standers, cause sudden Death: for I have often observed; that this thing may and usually does give truce, till it may be seasonable to proceed to Narcoticks, at least, if care be taken, that the Intemperature begun be not farther inflamed by giving Cordials and hot Medicines, in which case the Patients suddenly dye.

Sydenham.

XXVII. Here I would add this; if this Symptome would give so long truce, as that a Man might conveniently be purged before he take the Narcotick; this Medicine would yield so much the better effect. Wherefore I use to prescribe 2 scruples of *Pilul. Cochiar. maj.* dissolved in Betony-water; about ten or twelve hours before I give the Narcotick. Nor need we fear the tumult which this hot mass of Pills usually raises, for the virtue of the following Narcotick will make amends for that disturbance; and will cause most sweet and kindly Rest.

Idem.

XXVIII. As D. D. Ol. Borrichius did plainly remove an exquisite Tertian with Bottles full of hot water, placed round about the Body, which caused Sweat: So in the year 1674. I cured the Wife of N. of the same Symptome, when she was taken, in the first month of her being with Child, with an unusual Shivering and Cold all over her Body, and was much weakened thereby, by putting a bottle full of hot water under the soles of her feet; the sweating plentifully after it.

Simon Schol. zius, in m. c. an. 1676. obs. 140.

XXIX. Some set them, that are afflicted with a violent cold fit at the beginning, in a Bath, in which also hot Herbs have been boiled. But lest some error should be committed in it, or that the hot fit should grow stronger, certainly it were most convenient to foment the Stomach and Heart with a warm Decoction of hot Herbs, as Mint, Wormwood, Rue, Wild-marjoram, Chamæmil and Dill, with Anise and Fenil seeds. The beginning of the Fever being made hot, the Shaking is often discussed, and the state of the *Præcordia* is much better.

Fernelius.

XXX. I have often observed, that the Hickup arises from the disturbance and tumult raised by churlish Medicines in the Stomach and parts adjoining: For the stopping and reducing of which to their ancient peace, when the strength of Nature is not sufficient; there is great danger imminent. Therefore we must so direct our Cure, that what Nature of her self could not accomplish, Art may: And, by giving a large dose of *Diaferdium*, that is, 2. drachms; with Dill-seed and other Specifics, I never failed of my intention.

Sydenham.

XXXI. An Hickup in Fevers sometimes follows the intemperate use of cooling Juleps; as I have seen several in this condition, through the unadvised rashness of Physicians. And I took away this Symptome, contrary to the opinion of them all, by Lemnisc drinking of Wine.

Lemnius.

XXXII. Our Country Physicians deserve to be chid, who macerate People sick of Fevers with unseasonable thirst: for they destroy not a few with vain enduring of thirst. ¶ Some observe the same rule in all feverish persons; namely, they industriously abstain from drinking of cold water; for which reason, in the year 1649. an infinite number almost of sick persons was destroyed: When notwithstanding, the Fevers were continual; with a mixture of divers humours, and especially of Choler, yet not alone. When Men were tormented with the greatest thirst, they died parched up. When the dead bodies were dissected, the Stomach, Heart, Lungs and other inward parts appeared as it were burnt; wherefore we restored our miserable Patients to their health by cooling and moistning them.

Langius, l. 1. Epist. 20.

Patriolus, l. 1. Penec. 4. obs. 8.

XXXIII. We must not omit, that Thirst may sometime proceed from the Stomach, sometimes from the Liver, or the Lungs, or Kidneys; as Galen, in *lib. de loc. affectib.* writes. That which has its rise from the Lungs is quenched with Barley-water and Syrup of Violets; from the Liver, with cold distilled Waters; from the Stomach, with drinking cold Water; from the Kidneys, it is cooled with a Decoction of Liquorice.

Bridles.

XXXIV. Many People give their Patients, who are well nigh dead with Thirst, abundance of things preserved in Sugar, as Conserves of the sower of Citron, Jujubes, which though without

A 2

Sugar

Sugar they may perhaps quench thirst; yet mixt with Sugar, it is impossible they should take away thirst. Women see, and Children know, that Sugar increases thirst. It were better to take nothing at all, because if the Tongue were not made foul with these sweet things, it would for several hours time be troubled with less thirst. ¶ Industrious abstain from Syrups and Conserve in all Fevers, for Sugar easily turning into Choler, fewel is given to the Fever.

Sanctorius.

Heer, obs. 22.

XXXV. In a fit of an Ague, when the cold fit is over, Patients should not be kept so much from Drink as they usually are, seeing, as *Fernelius* and *Joubertus* testifie, if the Patient, who is burnt up with heat and very thirsty, suffer thirst for any time, and so his Burning be not helped, so much the more easily a Colliquation of his body will follow, while the Heat seizes and wasts the solid parts of the body; And Sweat also, which takes its matter from Drink, is by this means hindred, which might have been promoted by cold and plentiful drinking.

Platerus.

XXXVI. There are four sorts of Drink, of which *Hippocrates* treats, *lib. de viſc. Aent.* Barley-water, Water and Honey, Wine, Vinegar and Honey. In a dry Disease he neither makes mention of *Oxymel* nor Barley-water; not of the first, because an over cutting thing is not proper for a dry Disease; not of the latter, because it being drink, nourishes but little, because of its thinness. But he mentions Honey and Water, and Wine, as things that nourish and moisten. And he leaves the choice of either to the Physician, as if he apprehended, that sometimes in a dry Disease one of them might do hurt, and the other might do good: for if a dry Disease come from a cholerick humour, by reason of its furious quality. Water and Honey must be avoided by all means, and Wine must be given, because it moistens and administers strength to Nature, with an Absterſion or Incision. But if a dry Disease come from an over thick humour, that resists the concoctive faculty, Water and Honey must be rather given than Wine; as well to extenuate the grossness of the humour, as to moisten the Body; for Water and Honey moistens more than Vinegar and Honey.

Brudus.

XXXVII. In Fevers which have their original from a hot Cause, without a mixture of Phlegm, especially in Summer time, the use of common Water is to be chosen. But it must not be concealed, that wherever we desire concoction of a crude humour, of a phlegmatick kind, Drink of distilled Water does more harm, than that of natural Water. The former indeed, if it be given cold, cools on a double account, actually and potentially: Besides, it pierces more into the inner parts of the body, upon the account of its fiery quality. Whence it is manifest, that the innate heat suffers more from this sort of Waters, than from what is natural. Wherefore in a cold Cause, and in those that labour under a Weakness of any of their inward parts, I think, distilled Waters should be avoided.

Idem.

XXXVIII. Since natural Sleep in the beginning of an Ague fit is hurtfull, it is queried, Whether we must think the same of it caused by Art? (*See Agues in general, Paragr. XXIX.*)

XXXIX. Sleep in the beginning of a fit may seem proper to some, because it is a refresher of Mens bodies and a renewer of strength: for it is said to be the Authour of good digestion. But at the very time of the fit more intense and stouter strength is required, because at that time, when the peccant matter is moved, it must be attenuated, dissolved and dissolved, that it being at last by this means consumed, the end of the fit may the sooner follow. But the Negative should rather be held, for Men should be waking in the very fit, because the blood and spirits, and therefore the innate heat, in Sleep move inwards, yet this motion is contrary

to that whereby the natural virtue endeavours to discuss the matter in the fit, and remove it outwards: For the Heat, concentrated in Sleep, may make the inward effervescency of the Humours greater and so the Fever more violent. Yet, when the fit is ended, Sleep is not disallowed, when afterwards it egregiously relieves the strength, weakened by the battle betwixt the Disease and Nature.

Horſius.

XL. If a Physician be consulted, whether it be expedient for a sick Man, who begins to sweat, to be covered with clothes, and sweat quiet? or, on the contrary, whether he should not hinder sweating by fanning and motion? And considering the Sweat is hot, and that it begins to run from the whole body, and is yet doubtfull, as it is, of the beginning of the Disease, and of the day, and the Disease be not known, let him bid the Patient keep himself quiet, neither laying on more, nor taking away any clothes, and let him sweat a while. When he is dubious, he must visit the Patient again, and observe whether he be very restless? or, whether he begin to breathe hard? or, whether the Pulse be a little languid? If any such thing follow, let him order him to be removed and fanned with a fan. If none of these things appear, and he say that he is rather relieved than oppressed, let him proceed not only one or two but several hours, taking in the mean time, if the business be protracted long, some Broth for his refection. If, on the contrary, he be not only restless, and his Pulse argue weakness, but he faint also, or look thin in the Face, he must not only prevent it by fanning, but also anoint the body with some Astringent, as, with Oil of Myrtle, throwing on Powder of Mirtle and Pomegranate-flowers, &c. And the signs of a spending and fainting Sweat are said, and lastly, for it to be cold, and to gather in great drops about his Forehead and Neck, for his Eyes to be hollow, his Face and Nails livid: When these things appear, Fainting and Death is not afar off.

Valleſius.

XLI. It frequently happened, that they who were upon the recovery from Fevers, they especially whom the Fever had macerated a long time and had not left them till after long and plenteous evacuation (especially if they were of a weakly habit of body) it happened, I say, that they, as soon as they began to be warm in bed, were presently all over in a Sweat, whereby some were grievously weakened, and recovered their strength but slowly, and others were cast into a Consumption. Because I thought this could arise from nothing else but the blood, being so far depauperated and weakened by the contumacy of the Disease, that it could not assimilate, with Juices, which were newly brought to it, it endeavoured to cast them off by Sweat; I always persuaded them that were thus affected, to take three or four spoonfulls of old Malaga-wine, by the use of which their strength returned ever, and their Sweats vanished.

Sydenham.

XLII. In Autumn, 1675. dysenterick stools came upon an epidemick Fever, and sometimes a *Diarrhea*. I presently perceived they were symptomatick to this Fever, and not, as in some Constitutions, original and primarily arising. Which notwithstanding, seeing the cause of the Disease was included in the mass of blood, it did indicate blood-letting, which indeed, giving a Narcotick twice after it, was sufficient to conquer this Symptom.

Idem.

XLIII. It often happens that the Patient is vexed through the whole course of the Fever with a troublesome Cough, that is, the tumultuous mass of blood being evidently moved, and all things now looking towards a Sedition, it so falls out, that some loose and diffuent humours are carried out of the mass of blood through the Vessels of the Lungs, or, by *diapedesis*, into the inner membrane of the Windpipe, which is very tender, and ended with an exquisite sense. Hence a Cough comes, which at first is dry, because the matter being thin escapes the

the expulsive faculty, then it grows thick and becomes difficult to expectorate; and, because it is by degrees baked, hence it comes to pass, that the Patient is struck with fear of strangling, because he wants strength to raise the viscid matter: In this Ail I seldom use any other Medicine but Oil of sweet Almonds new drawn, unless it so happen that the Patient loath Oil, for then I endeavour to give ease by common Pectorals. And I prefer it before all other Medicines for a Cough, because since it is necessary to give these more liberally and in a larger quantity, if we will do any good, by this means we load the Stomach, which is weak already and inclined to reach; by the same means also we are sometimes hindered, that we cannot do other things which should be done at that very time. Neither do I apprehend, nor am I convinced by experience, why we should be so afraid of the use of this Oil, for grant it be in its own nature hot and inflammable, yet this heat is not so much, that it may not be abundantly compensated another way, for above all things it conduces to the Breast by a manifest virtue, it both opens and smooths the passages, and so promotes expectoration, whereby (especially if it come plentifully) the blood is both discharged of a troublesome humour, being now commodiously voided, and by the same means it is a little cooled; and therefore I am not much concerned when I see this Symptom intervene, by benefit whereof no small benefit accrues to the Patient. Onely I would warn you of one thing, that it is not safe at one and the same time to give this Oil by whole spoonfulls, for there is danger, lest we bring a Loathing upon the Stomach, and a Looseness upon the Guts. We must give it therefore sparingly but frequently, by day and night, to the end that we may not onely ease the Cough by causing expectoration, but also that we may a little comfort the Patient's wasted strength by a kindly nutriment.

XLIV. Singular respect and care must be had of the Stomach in Agues: for sometimes it is weakened beyond measure, so that Crudity arising from thence yields new matter to the Ague. Then the best way is, as Sennertus testifies, to evacuate what is crude of the aliment in the Stomach and first ways by Vomit twice a week: By which Remedy the toughest Agues are more successfully removed, than by any other Remedy. Notwithstanding that the Spleen is reckoned the Seat of a Quartan, and the Liver of a Tertian Ague. For so both the matter near these parts is evacuated, and the parts themselves are freed from cacochymie. Hence it is that the Vulgar now and then cure putrid Fevers by taking of adust Wine, Pepper, &c. all which things yield fewel to the Fever; yet they comfort the Stomach and waste Crudities.

XLV. In a putrid Fever troubles and disorders about the Stomach and first ways use to annoy Men through the whole course of the Disease, such as Loathing, Vomit, Want of appetite, Incoction, Loosness, Roughness of the mouth and tongue, and a Bitter taste. These things are attributed for the most part to the humours first gathered in the Stomach, and putrefying there, but farthermore, because the recrements of the Chyle are burnt up with too much heat, they degenerate into noxious matter. Such Accidents often happen, because the purging and filth of the blood and nervous juice, while they ferment, are carried inward, and being left between the membranes of the Bowels, they cause Convulsions, and also make a mass of ill and noisome humours. I have often observed about the beginning of Fevers, that the effervescent blood discharged its recrements inwards, to the great benefit of the Patient, when, although great troubles about the first ways did accrue, yet the effervescence was therefore milder, the Pulse moderate, and the Urine laudable, and they that had their Fevers in this man-

ner, did with a thin Diet and the use of gentle Purges recover in a short time: But if in this case I used a violent Purge to extirpate the humours, this natural purging of the blood being hindered, the Fever presently grew high, with a red and troubled Urine, high Pulse, Watching, and other horrible Symptoms. Also often after the state of the Disease, the adust and excrementitious matter is separated by this inward lustration from the blood. Hence sometimes a *Diarrhœa*, sometimes a crusty plaster of the mouth and throat succeeds; wherefore there is need of caution about the accidents which happen in the first ways, lest while we prevent them, we pervert Nature's motion: And while we guard these parts against the incursion of the morbid matter, lest we unhappily keep the same blockt up in the mass of blood.

XLVI. As I have several times, so once I observed, that Narcoticks given to two persons in a Fever within the fifth day, through the Physician's fault, turn'd Necroticks, who being laid in a long lasting Sleep went to their everlasting Rest. ¶ It is good in Fevers to wash the Privities and Ears, because these nervous parts being cooled and moistened, communicate to the Brain. For as Lime, when it is moistned, fumes, so these parts dried and parched with the heat of the Fever, fume out a gentle and benign Vapour, whereby Sleep is procured.

XLVII. But if Watching continue after the Fever, other Symptoms ceasing, I have observed, that a Linen-cloth dipt in Rose-water, and applied cold to the Forehead and Temples, has done more good than any Narcoticks.

XLVIII. These Symptoms especially torment People in Fevers, Pain, Watching and immoderate Evacuations. There are divers Matters which answer the Indications; but the laudable Medicine of *Opium* carries away the prize from all the rest, in which if the just dose and proper season be observed, no error can be committed. But if either of these be missed, it may so happen, that the last debility must be imputed to it. ¶ In continual Fevers, when the strength is almost spent with Watching and Restlessness, I remember, I often rightly proceeded to the use of *Laudanum Opium*, A young Man is my Witness, who being given over by reason of the lowness of his strength, recovered his former health, Sleep being provoked by this means, the Spirits being dissipated, that did the violence, and others recollected in their room.

XLIX. Vomiting does sometimes so torment People taken with a malignant Fever, that whatever is given them, they immediately throw it up again. And although they be troubled with thirst, and dryness, and blackness of Tongue; yet they can bear no sort of potent matter, but they presently vomit up all manner of Juleps, Emulsions, Ptilians, and even simple Water, as soon as they are taken. This most grievous Symptom is immediately cured to a miracle, by taking a drachm of the Salt of Wormwood in a spoonfull of fresh Juice of Lemon, as I have learned by experience.

L. A certain Person was sick of a slight Tertian; in the fit he was so troubled with vomiting, that he swooned at the very thought of it. I gave him above half a scruple of Pills of Aloes in a Dose, two hours before his fit, they did their office by gently purging him in the fit, so that he was well in a short time.

LI. It is manifest from *Hippocrates*, 1. de rat. vict. who granted Water to one in a Pleurisie, when he was very thirsty, that when Symptoms arise to that height as to add to the Disease, or waste Nature's strength, the Indication for Diet should rather be taken from them: Nevertheless we must do our endeavour to give such things, as may, if possible, be proper for the Disease, or at least not inconvenient. For *Hippocrates*, in the place forequoted, has

Willis, de
Febr. c. 106

H. ab Heer,
obs. 5.

Rondelatus.

Sydenham.

Rolfinectius,
de Febr.
c. 106.

Greg. Horstius,
1. 10.
obs. 3.

Riverius.

Rolfinectius.

this passage; But when any Pain torments, you must give Oxymel to drink, in the Winter hot, in Summer cold: And if his thirst be very great, he must use Honey and Wine and Water. Reason tells us the very same thing, that the Intention of Cure must not be changed for every violence of the Symptoms; but for that which is considerable: for since Symptoms are the effects of Diseases, by taking away their cause they vanish; but if they be considerable, they give the stronger Indication for Cure. And their greatness is to be defined, when they are the cause of some preternatural disposition, which either adds to the Disease, or wastes the strength of Nature. Whichsoever of these things happens to be the cause of the greatness of a Symptom, the Symptoms may justly then supply the course of Diet and Indication for Cure: As, to a pleuritick Person, who is a little thirsty, you must give Oxymel, or Melicrate, which of them the Disease shall require: But if he be troubled with violent thirst, you shall not use such things as respect the Disease and its Cause, but such as lay thirst; for much thirst dries the spittle, and makes the Disease difficult of coction, and increases the heat of the Fever; wherefore we must give Melicrate and Water, taking the Indication from the Symptom, for Water should not be given for the Disease sake, by reason it is an enemy to the maturation of the Grief. Thus therefore the greatness of Symptoms must be defined, so as the method of Cure and indications of Diet may be taken from them. But when such Symptoms arrive at the said greatness, that is, are instead of a Cause in reference to the Disease, they are either as an urgent Cause, or, *Sine qua non*, the Disease cannot be cured; Wherefore the Indication is stronger, which is taken from them, than from the Disease, as may be gathered from the doctrine of complicated Affections.

Brutus, de
Vidua Febr.
l. 3. c. 27.

LII. In giving of Medicines, Cautions and Rules of no small moment are taken from the Pulse. Purging and Vomiting are prohibited by an over quick and violent Pulse, and also by a very low one; for while the blood is too effervescent, evacuation is not very proper, both because what is noxious is not voided, and also because the strength is much weakened by the perturbation: And when the Spirits are broken, and the strength is low, Physick casts it lower, and sometimes rather destroys it. Wherefore, when a Physician designs evacuation upwards or downwards, let him first feel the Pulse, and let him attempt these motions only when Nature is strong and sedate, that she may be able to attend the operation of the Medicine, and to support the Patient's strength. Nor is there need of less circumspection for Diaphoreticks and Cordials, which if they be used in the Fever fit they too much increase the violent motion of the Heart, and very often break its strength: Also when the Pulse is very languid, if hot and strong Cordials be used, Life may easily be extinguished (as when a little flame is quite put out by a strong blast) wherefore it is a vulgar observation, that Cordials often hasten Death, for that, in putting the blood into too great a motion, they sooner waste its strength. And yet there is need of the greatest Caution, and direction of the Pulse, in giving Narcoticks, for they, (because they do their work by extinguishing and fixing the vital Spirits, when they are over active) if they be used in a weak or faltering Pulse, they either render the Spirits too weak for the Disease by diminishing them, or they bring a perpetual Sleep by too much suffocating them. Wherefore in a languid, unequal, or formicating Pulse, Opiates should be avoided, as you would avoid a Snake or a Toad.

Willis, de
Febr. c. 10.

Febris Alba seu Amatoria, *The White or Love Fever.*

(See *The Green-sickness*, Book III.)

Its Description and Cure.

Hippocrates, in his Book *de Virginitate morbis*, calls this the *Wandering Fever*, some have named it the *White Jaundice*: For several Symptoms give intimation of a white and cold humour; seeing first of all the *menstrua* being stopt, in time of youth, in a hot and moist constitution, have caused a coldness in the whole body by suffocating the innate heat, obstructions in the Mesentery and Womb concurring not a little thereunto, and it may be in the hollow of the Liver, which hindring the ventilation of the natural Heat, increase the suffocation of it, upon which many Symptoms testify a cold Intemperature.

The primitive Cause of this Maiden Disease, was the intense Meditation of this Virgin, in which the innate Heat and Spirits being diverted from the Stomach, Crudities were bred, the original of Obstructions in the lacteal and mesenterick Veins, whence arose a hypocondriack Indisposition, and complaints of Illness at the Stomach, and rumbling of the *hypocondria*: Moreover the mass of blood was infected, which being made thick, and not having free passage through the Veins of the Womb at set times, but settling in them, has gathered obstructions in the Womb also, and made the monthly purgation less; which being increased, a perfect suppression of them followed. For the blood not having an efflux (saith Hippocrates, lib. *de Virginitate morbis*) through the quantity, it rebounds to the Heart and Diaphragm; and when these places are filled, the Heart becomes foolish, then from fatuity comes torpidness, then after torpidness a delirium takes them; as when a man has sate a long time, the blood being depressed out of the Hips and Thighs into the Legs and Feet, causes a numbness; and after the numbness the Feet are unable to walk, till the blood return to it self, &c. And it returns very quickly, for it soon flows back because of the rectitude of the Veins, and it is not a dangerous place of the body; but it flows back slowly from the Heart and Diaphragm; for the Veins are crooked, and the place is dangerous, and apt for a delirium and Madness, by reason these parts are replete, and a Shivering with a Fever takes them, which they call *Wandering Fevers*. And these things being thus, she is mad, because the heat is increased, and she is timorous and afraid, because of Darknes; she suffers strangling and prefocation, because of compression about the Heart; her mind being sad and anxious, because of the badness of the blood, draws on mischief. And I add, that the whole body is not onely cacoehymick, but moreover rendered cachectick, as appears from the vitiated colour of the whole, languishing of the Strength, swelling of the Eye-lids and Feet.

But Hippocrates seems to intimate that it is possible this Disease may come not onely from the stopping of the *Menstrua*, but from the retention of the Seed; when he asserts that Virgins are cured, when either they lye with a man, or their *Menfes* come; especially if the Virgins be of a hot and moist complexion and of a good habit.

That the Patient may be rid of this Fever, it is necessary that the mass of blood be purified, and be reduced to a more laudable state: Therefore, First, The cleansing of the Stomach and first ways must be premised. Secondly, The Obstructions of the Mesentery and Lacteal Veins must be opened. Thirdly, The Cacoehymic of the whole venous kind must be taken away. Fourthly, The Cachexy, that is beginning must be provided against. Fifthly, The *Menstrua* must be solicited by opening Hystricks. And, lastly, The Bowels must be strengthened.

As

As question cannot be made concerning Blood-letting, since it offends in quantity, substance and motion; so we must act with caution in the present case concerning the quantity; for the blood is already degenerated into a Cacochymy: and although Hippocrates teach, that the cure of this Disease is taking away Blood, yet he orders this to be done before the whole Body be Cacochymick, and while as yet it is not altogether so Cachectick. Wherefore in a tedious and confirmed oppression he, 1. de morb. mal. 10. purges the belly upwards and downwards, because a Cacochymy is not taken away by bleeding, but by purging. Hence after a copious Diarrhea a Maid, 4. Epidem. recovered. The place must be the right jecorary Vein, that Blood may be drawn, but not drawn downwards, before the obstructions of the Womb be opened, and the Veins be made pervious; for then the Saphaga may be opened, only upon the account of the Blood's motion. In the mean time an Issue must be made in the Hip.

For emptying the Stomach, a Potion with Manna clarified, or Lenitive Electuary with Tartar. For the preparation of the first ways, Ozymel simplex, with Mel Rosarum simplex, of each 1 ounce and an half, Cinnamon Water half an ounce. Mix them for one Syrup, and so for five more, then let either of the said Medicines be repeated.

Then the obstructions of the Mesentery and Laeal Veins must be cured with attenuants, aperients, and evacuators. A preparative may be thus made: Take of juice of Cichory clarified 2 ounces, Juice of Borage 1 ounce, Tartarum vitriolatum 10 grains, Decoction of Cichory, Borage, Endive, Cinquefoil, Parsley, Agrimony, 5 ounces. Mix them for a Syrup: To which may be premised about 2 ounces of dilute Ozymel, in which she may continue ten days, and about the middle of the time let this be given her; Take of Pilul. de tribus cum rhab. de Hiera cum Agaric. each 2 scruples, Electuary Lenitive six drachms; mix them. Make a Bolus. And when ten days are over, Take of Elect. Cathol. 4 drachms, Rosat. Mesues 2 drachms, Pilul. de tribus one drachm; mix them. Make a Bolus. Upon which, when an hour is over, let her drink Broth altered with Barley, or Barley-water.

The Cacochymy must be taken from the Blood by Epicrasis, by preparation and frequent purging. Nor must the little Fever be feared; for in this case we must ply the Cause, making very small reckoning of the Fever. And we must insist 12 days on the preparation, but a Purge must be given every fourth day; Take of Decoct. Epith. Mesues 6 ounces, or if she had rather have a Bolus, Take of Extr. Sennae 1 drachm, black Hellebore half a drachm, Lenitive Electuary half an ounce; mix them. Make a Bolus. Upon which let her drink clarified Whey, because Hellebore has in it a very hot quality.

When these three Purges are taken, we must not believe, the whole venous kind is defecated from impurities; wherefore Purges must be repeated, which have also an opening faculty, they must be prescribed in form of a Syrup, 2 ounces of which must be given every day in half a Glass of White-Wine, persisting in the use of it for twenty days.

Then we should take care of the Cachexy; and things that purify the fleshy parts, and defend them from ill humours, should be given, that is, Diaphoreticks, sensible Evacuators, and insensible Digestives. To which intention sweat might give satisfaction, some convenient Decoction premised, or the continued use of Viper Powder: But because our chief intention ought to be, to open the Veins of the Womb, to provoke the Menstrua, and purge the whole Body by those ways that are proper and usual to Nature; therefore lest the humours should be diverted from the Centre to the Circumference, setting aside the Intention, we must first make use of

aperient Hystericks, and things that provoke the Menfes.

For the opening stubborn obstructions of the Womb, the use of Steel is usually extolled by all men, especially of potabilis M.D. whose virtue, that it may come to the Womb, wants a vehicle. Therefore let a decoction be made, which may have the faculty to do that, and to dry the whole body; Take of the best Sarsa 1 ounce, fat Guaiacum, root of Gentian, wood of Sassafras, each half an ounce, distilled water of Cichory, Maiden-hair, Motherwort, each 1 pound; mix them; make an infusion for 24 hours. Then let them boil to the consumption of half. Keep the Colature for 2 doses, to be given early in the morning, to which 10 drops Chalyb. Pot. M.D. may be added, and a spoonfull of Savine-water, or 5 drops of its Oil.

Also the opening of the Veins must be procured outwardly, not by Pessaries, or Injections, but by things applied outwardly, by making a fomentation, and applying it with a large Sponge to the Region of the Womb: anointing afterwards with Oleum Lilior. alb. Aromatizat. Injections also in medicated Waters are good.

Things to stop the hysterick symptoms may be, Treacle-water, with Water of the whole Citron, Oil of Amber to 2 drops in Cinnamon-water, middle aged Treacle, or Triphera without Opium, with water of Pennyroyal or Motherwort.

Then the great Antidotes will strengthen the Bowels, Treacle-Salts, Salt of Wormwood, Mint. Let Wine for Meals have Rosemary, Guaiacum or Sassafras, infused in it.

Joh. Rain.
Fortis, Trad.
de Febr. p.
m. 42.

Febris Algida, or, The Cold Ague.

Its Nature and Cure.

Cold Agues are observed some times to be troublesome not only in cold especially, but in Cold alone, so that sometimes, and more frequently, a little Heat does follow; sometimes, but more seldom, none at all: We have such in our University Hospital, so manifest, that not only in the beginning and encrease; but at the very height and declination of the fit, yea, and when it is over, the Patients are always sensible of Cold, never so much as warm, much less hot at any time.

They owe their Original to a more acid Pancreatick juice, joined with great store of viscid Phlegm, Bile in the mean time being very dull.

This Mixture will be proper for the Cold and other Symptoms, that use to accompany it; Take of water of Parsley 2 ounces, Fenil 1 ounce; Theriacal. simpl. or vitæ Matthiol. 1 ounce and an half, volatile salt of Amber 1 scruple, Syrup of Carduus benedictus 1 ounce. Which will be more effectual, if you add to the same of Laudanum Opiatum 4 grains, Oil of Cloves 2 drops. I have not hitherto observed any thing temper the cold equally to this. And as long as the Ague lasts, the Patient may take one spoonfull of this, or some such liquor, 3 or 4 times in an hour.

Sylvius de
le Boë, Præf.
l. 1. c. 30.

Febris Anginosa, or, A Fever and a Quinsie.

Its Description and Cure.

IT invades men at any time of the year, but most between Spring and Summer time, and young men and them that are of a Sanguine complexion above others; but red haired men, as I have observed more than once, above all the rest. At the very first invasion of the Disease they are cold and shake, a Fever follows, and a little after comes a pain and inflammation of the Jaws, which if it be not speedily helped, immediately the Patient cannot swallow any more, nor draw his breath through his Nostrils; but his Throat is stoppt with a certain sense of strangling, by the inflammation of the *Voula*, and swelling of the Tonills and *Larynx*.

In the first place I take a great quantity of Blood from the Arm, then from each *Ranula*; then I touch the inflamed parts with Honey of Roses, and Spirit of Sulphur: By and by I prescribe the following Gargarism, to be held in the mouth, till it be warm, without stirring it; Take of Water of Plantain, red Roses and Frog-spawn, each 4 ounces, Whites of Eggs reduced to a water by beating, No. ij. white Sugar-Candy 3 drachms, I order an Emulsion, as in a Pleurisie. The next morning, if the Fever and Pain do not abate, I open a Vein again in the Arm, and let Purging alone, till the next day. If both be abated, I presently give a gentle Purge, which after bleeding is necessary above all things, as experience testifies. If perchance, even after purging, the Fever and Symptoms should proclaim War, this must be subdued by repeated Blood-letting. Let the Patient every day keep up some hours from his bed, because the warmth of it adds strength both to the Fever, and the Symptoms.

But we must take notice that these Quinsies which are only a Symptome of this Stationary Fever, as I call it, love to be cured by the self same method, which the Fever challenges for it self; and therefore must be thrown off by Sweat and the Pores of the Skin, or by any other method, that is due to the primary Fever, whereto they are inherent.

Sydenham,
Obs. in Acut.
Sect. 4. c. 6.

Febris Anhelosa, or, The Short-breathed Fever.

Its Nature and Cure.

ANhelous or Short breathed Fevers have their name from difficult and anhelous respiration; and they put the Patients to strange and miserable Anguish either with or without palpitation of the heart. I have observed them more than once begin with a distension of the *Abdomen* and anxiety of the *Præcordia*, the Pulse being immediately weak, small and frequent, chilness and pain troubling them in the Region of the Loins at the same time. But if then they broke wind either upwards or downwards, the fit was less, if not, it was more grievous: for after this distension and anxiety had lasted one or more hours, both of them sensibly abated, and then an exceeding difficulty and shortness of Breath was raised, so great indeed, that the Body could not indure to be stirred or moved in the least, the Pulse by degrees growing rather

weaker than stronger, and continually more frequent, together with the Veins every where very turgid, which, out of the fit, were small and scarce conspicuous. This shortness of Breath was sometimes more grievous, sometimes more slight, and grieved them sometimes a longer, sometimes a shorter time. Wherefore Medicines that are good for Hypochondriack prefocation were often here likewise used with good success. And at length the fit ended rather in a Damp than a Sweat, till a new one returned, seldom every day, often every other day. I think these Fevers (as also suffocating Fevers, of which hereafter) should be ascribed to Vapours, but not very austere ones, and in like manner from a less austere Pancreatick juice, but arising from this, mixt with viscid Phlegm meeting it in the small Guts, and therefore the more flatulent, from which the symptoms enumerated may easily be derived, and well enough explicated. The anhelous anxiety, since it owns the same but a slighter cause, will be cured and abated with the like Medicines, as well in the fit, as at the beginning of it, being often used in a less quantity.

Sylvius de
le Boë, *Præx.*
l. 1. c. 30.

Febris Arthritica, or, The Gout-fever.

Its Nature and Cure.

SOME Practitioners reduce Arthritick fevers to Catarrhal fevers, because they think the Gout owes its rise to Catarrhs; But because I am of opinion, that another humour is carried together with the Blood by the Arteries to the joints, which breeds the Gout, I cannot but think, that Gout-fevers should be distinguished from Catarrhal ones. But because I could accurately enough observe the rise and progress of the Gout from the faithful relation of the sick, I as often took notice that it came with a Continual fever, or an Ague. Wherefore when a new Ague fit came, the Gout was not a little increased, till it either turned to a Continual fever, or ceased of it self, or the Ague was removed by art, the Gout-pains nevertheless continuing. I reckon to find Gout-fevers in the Pancreatick juice so corrupt, that it is troublesome only to the joints; whether it being also endued with a considerable Acrimony, which is most frequent, carries the Bile thither along with it, wherewith it had vitiously fermented, and causes a most bitter pain: Or being not so sharp, and hurting the viscid Phlegm, not the sharp Bile, which is much dulled with mixing with it, it rather hinders the motion of the part affected with an œdematous tumour, than a sharp pain. Where we must observe, that the Ague fits, which come every or every other day, do trouble the sick with no notable or molesting Cold or Heat, but rather with a small Head-ach, and thirst now and then, a little more frequent Pulse concurring, at first less, then something greater, after which also a new fit is observed, then, after a few hours, the Gout-pains are exasperated, and so indeed, that although sometimes sooner, sometimes later, they remit again in the part; yet they do not wholly intermit, but though the Ague fit be removed, the Gout-pains nevertheless continue, sometimes more, sometimes less, till they depart, either of themselves, or by art. The Cure of the Gout, accompanying the Ague, will consist, First, In an universal amendment of the Pancreatick juice. Secondly, In the correction and carrying off the Bile, that is of it self out of order, or by accident. Thirdly, In the alteration or diminution

Sylvius
de Boë, *Præx.*
l. 1. c. 1.

Sylvius,
Prax. Med.
l. 1. c. 30.

tion of whatever Phlegm is peccant. And, Fourthly, In guarding the joints affected, against future pain, and in ridding them of the present and urgent pain.

Febris Asthmatica, or, An Asthmatick Ague.

Its Nature and Cure.

Asthmatick agues are not unfrequent, so called from an *Asthma*, sometimes more grievous, sometimes more slight, that accompanies them, in which also the anxiety and distension of the *Abdomen* go before, and when they cease, shortness of breathing and a true *Asthma* follows, which, together with the fit, is long enough in abating, sometimes one or more days, and then it ceases, sometimes it continues after the fit is over. I saw such an Asthmatick ague once return at the fourteenth day, and hold the Patient very ill every time for several days, if it were not abated with convenient Medicines, both as to the anxiety and duration. The thing that produces Asthmatick agues, in my opinion, is viscid Phlegm found in the small Guts, and dissolved by the Pancreatick juice, which is about to cause a fit of an Ague, and carried with it to the Heart and Lungs, and staying there; and causing a stertorous respiration, while either many or few vapours also come out of the part, and make the fit heavier or lighter, longer or shorter. The *Asthma*, companion to the Ague, will be cured after incision of the Phlegmatick glutinous humour, by vomiting a few hours after the next fit, and sometimes a day before the fit, especially in such as are easie to vomit: for they may otherwise be purged with Phlegmagogues (such as are all Mercurial Medicines, Coloquintida, and Hermodactyls) which are more powerfull and effectual. As for phlegmatick humours, that sometimes fall likewise from the head, and fill the *aspera arteria*, the same Phlegmagogues will be proper for them, often in a less quantity, used together with incisers and correctors of Phlegm, and especially in the form of Pills. As to stultent Vapours, that so often, if not always, produce an *Asthma*, or at least increase it much, all things will be convenient, which hinder the matter of them, and that discuss and dissipate them when produced.

Sylvius de le
Boë, Prax.
l. 1. c. 13.

Febris Cacatoria, or, A Loofe-fever.

Its Cause and Cure.

There are Fevers observed to be very troublesome and weakning to the Patient, through a large or a frequent going to stool, and sometimes also griping at divers times of the fit, and therefore they are called *Cacatory*, *Dejection* or *Loofe-fevers*. I think it ought wholly to be imputed to choler, that is not so volatile, but rather sharp, and by a mixture of the Pancreatick juice yet made more sharp, and after the Phlegm in the Guts is dissolved, fretting the Guts, and irritating and forcing them upon propulsion of their contents downwards. What things soever fix Bile, and powerfully render it inept to ferment, will cure them, as are all austere things, thickeners and coagulaters of it, as also Opiates dulling of it, mixt together, and often used at

several times in a small quantity, for example; Take of Conserve of red Roses 2 ounces, *Discordium* 2 drachms, *Confectio Hyacinthi* 1 drachm, *Terra sigillata* 1 scruple, Dragon's Blood half a scruple. Mix them, make an Electuary. And Medicines made in a dry form must here be preferred, because moist things dilute the Bile too much, and the Pancreatick juice, and rather cause than stop their Effervescence.

Sylvius de le
Boë, Prax.
l. 1. c. 30.

Febris capitalis, or, A Head fever.

The Contents.

Its Nature and Cure. I.

Its Epidemical Constitution. II.

I. THE seat of all Fevers must not be sought in the lower Belly, for oftentimes there is an Obstruction, or an humour thoroughly fixt in certain parts; as in the Head, Spleen, Lungs, &c. or some corruption is contracted, whence a Cephalick, Splenetick, Pulmonary fever, &c. ariseth. That the focus of burning fevers is in the Head *Hippocrates* seems to assert. If in a Burning fever (saith he *1 Prorrh. 18.*) there be a noise in the Ears with dimness of sight, and a stoppage arise in the Nose, they are mad from Melancholy. *Galen* explains this place, of a Burning fever, whose focus is in the Brain, by reason of Bile gathered in it, which causes the Inflammation. Such a Fever, generals premised, must be cured particularly by such things as ease the Head of the Burthen, by opening the Veins of the Nose and the Jugulars, by applying Leeches to the Temples, Forehead, and behind the Ears, by Arteriotomy, &c. In Summer, 1678. such Fevers were abroad, and were reckoned by most of our Country Physicians for Malignant, because the heat in the whole Body was gentle; but there were evident signs of the Head's being full, from these Symptoms, the Head-ach, Doting, and Sleepiness to excess. Most escaped, who were bled betimes in the Jugulars, or who had a Hæmorrhagy; In some, who neglected these means, and used onely Bezoarticks; after they were dead, the Blood burst out at their Nose, Mouth and Ears.

II. About the beginning of the month of July, 1673. a certain sort of Fever was abroad, which at the first coming had Symptoms joined with it, that gave no obscure marks, that then the inflammation was greater, and more spirituous, than when the Disease was grown older. Beside what things are common to all Fevers, these attended this Fever: The Patient was for the most part troubled with a pain in his Head, and a violent one in his Back, with stupidity likewise, and a certain affection not unlike a *Coma* was remarkable, wherewith the Patient being taken was dull and doted, yea and sometimes drowzed for several Weeks, and could not be awaked without loud calling. His Head when he recovered was weak and infirm for several days, it nodded sometimes this way, and sometimes that, and there were other signs which shewed that the Head had suffered very much. Sometimes the Patient did not so much drowze, as calmly dote. In Autumn, 1675. this Fever did affect to seek its flight by a Dyentery, and sometimes by a *Diarrhea*. As to the Cure I accounted nothing more proper than to fix my Eyes on what did good, and what did harm. The violent Head-ach, and the propensity this Disease had to fix pains in the Sides, as also bloud like that of Pleuriticks, presently taught me, that there was no small Inflammation in this Fever, nor yet that it could bear that plentiful Bleeding which is proper for a Pleurisie: for after the Blood had

had been let the first or at least the second time, it wholly lost the fizy colour, wherewith the surface of it was covered, nor was the Patient relieved by repeated Bleeding, unless perhaps the Disease turned into a true Pleurisie, which sometimes fell out, after a Regiment hotter than it ought to be. Now when I was deterred from repeated Bleeding both by Experience and Example, although it was clear, that this Fever was not a little inflammatory, nothing remained, whereby its Heat might be quenched, besides Clysters often repeated and cooling Medicines. But beside these symptoms, which openly bewrayed Inflammation, that *Phenomenon* of stupidity, familiar to this Fever, did fully indicate, that Clysters should continually be repeated whereby the febrile matter, which so readily got into the Head, might be diverted from it: Moreover, they were substituted in the room of repeated Bleeding, which the peculiar nature of this Disease could not well endure, and supplied its defect, in quietly and gradually tempering the Blood, and carrying off the morbid Cause. Farther, I thought large Epispastick Plasters, applied behind to the Neck, were of more use in this Fever, than in others, wherein the febrile matter did not seize the Head so much: For by the violent pain and heat which the said Epispasticks usually impress on the part whereto they are applied, the matter which otherwise would ascend to the Head, is derived to the place so affected. To these means, and a Regiment conducing to the same end, of cooling the Blood, the Disease at length did, as it were, naturally, and of its own accord, give way, how much soever it raged, if a man encountered it in any other method, which was clear to me from Experience: For when the edge of the Disease was taken off by the foregoing Ebullition, and the Patient was out of Gun shot, and secure from those violent Symptoms which depended on it, we found nothing better than to let the Disease take its own course, and gradually abate of it self; which ever succeeded better with me, than to attempt any violent evacuation whatever, at such a time: In the mean time I forbade my Patient flesh, but gave him as much small Beer as he would drink. And there was one thing more, which must not be forgot in describing the Regiment of this Disease; because upon the credit of manifold experience it turned to the Patient's advantage, namely, that the Patient kept every day up from his bed for some hours; or if his weakness hindered that, he put on his cloaths at least, and lay upon the bed, with his Head somewhat high. For when I considered the great violence, wherewith the Fever was carried to the Head, and the inflammatory disposition of the blood also, it came into my mind, that the Patient might reap some advantage from the posture of his Body, if, namely, it were such as that the heat might not at all be encreased by what was circumambient (which it must of necessity be, if he kept in bed continually,) nor the violence of the blood tending towards the Head promoted, seeing thereby the heat of the Brain would be encreased, and therefore the Animal Spirits heated and exagitated, upon which there would be a more vehement vibration of the Heat, and an encrease of the Fever.

I found the foresaid method, by Bleeding and Clysters succeed most happily, but it always had not only anomalous and ill natured Symptoms, but a dubious Issue, when it was provoked by Diaphoreticks. In the mean time that tacit *Delirium* grew eminent, which though indeed sometimes I have seen it come of it self, yet by the over diligence of Nurses, mis-employed in causing Sweat, for the most part it was invited: For by this means the morbid matter, which in this sort of Fevers refused to give way to Sweat, being violently moved, was at length raised to the Head, to the great hazard of the Patient.

I could not conquer the stupidity (very familiar to Children) when the Disease came first, although I left no stone unturned, and took to my assistance repeated blood-letting, in the Armes, Neck and Feet, Vesicatories, Cuppings, Clysters, Diaphoreticks of all sorts, &c. At length, after I had bled in the Arm, and drawn a Blister in the Neck, and given two or three Clysters of Milk and Sugar in the first days of the Disease, I resolved to try nothing farther; but only that I forbade the Patient Flesh, and all spirituous Liquors whatever. In the mean time I diligently attended Nature's method, that insisting on her footsteps, I might at length learn to conquer this Symptom. In the mean while the Disease which I was watching withdrawing safely, though slowly, at length vanished. Therefore I reckoned I was to insist on this Method, in all Fevers which I thenceforth had the cure of. This I know by diligent observation, that in this Fever the said Symptom, after general Evacuations, I say, after Bleeding and Clysters, used to be successfully conquered by Time alone.

A Phrenzy came upon this Fever, but rarely, in which the Patient slept neither night nor day, he could no way be ruled, and it took him away in a few days, unless the inflammation were stopt. And here Spirit of Vitriol did me service above all other things, which after Bleeding and a Clyster or two, I gave to be dropt into small Beer for his ordinary drink: This in a few days procured sleep, and having conquered all Symptoms, restored the Patient, which indeed I could effect by no other method. And this was abundantly made out to me by often repeated Experience. Sydenham, Obs. in Acute Febr. p. 317, &c.

Febris Cardiaca, or, The Heart-Ague.

(See Febris Syncopalis.)

Its Description and Cure.

Heart-agues occur, being accompanied with unspeakable, and oftentimes intolerable pain, about the upper orifice of the Stomach, and they are especially grievous in this Symptom, whether vomiting concur or not; sometimes they are Epidemick. The Pancreatick juice breeds them, when it has got a corrosive faculty by stagnation, especially when sharp Bile concurs, and a potent Effervescency happens upon their conflux, whence very sharp Vapours arising to the upper orifice of the Stomach, they sharply fret and corrode it.

So bitter a pain at the Heart will be cured by Opiates especially, which may be added to divers Medicines, according to the diversity of other Symptoms that concur therewith, because they assuage both the sharps, which are the cause of this Disease. Let them be taken often, and in a small quantity, till you obtain what you desire. Sylvius de le Boe, Pract. l. 1. c. 30.

Febris

Febris Catarrhalis, or, A Catarrh Fever.

The Contents.

The Description and Cure. I.

It arises from the Mesentery. II.

I. THE immoderate Heat last Summer was attended by as intense Cold the Winter following. The Earth was covered with Snow, a North Wind blowing till the Calends of *June*. All the Winter it was a pretty healthy time. About the end of *April* in the year 1658. there arose a Disease on a sudden, which seized very many at once, so that in some Towns above a Thousand People were sick together in one week's time. The Pathognomick Symptom of this Disease, and that which first invaded the Patients was a troublesome Cough with much spitting, and a Catarrh falling upon the Throat, Palate and Nose: There was also a febrile Intemperature, with Heat and Thirst, want of Appetite, spontaneous Lassitude, and a dull pain in the Back and Limbs. The Fever was in some more remits, that they could walk abroad; in others more intense, with heat, great thirst, watching, hoarseness, and other Symptoms. The original and formal reason of this Disease were chiefly founded in two things, namely, in that there happened at the same time a more than usual effervescence of the blood, caused by the Spring season, and also a great constriction of the Pores, caused by a precedaneous tract of time, that was exceedingly over cold, that there was not free room for the blood as it wrought in the Veins. The case stood thus, as if Wine, when it begins to work, were put in Vessels close stop: for by this means both the Vessels and liquor are in danger of being lost. But, that a North Wind is most apt to produce Catarrhs, besides *Hippocrates* his Testimony, common Experience confirms it: As to the Symptoms joined with this Disease, they were caused by Blood fermenting too much, and not eventilated enough; therefore a simple Continant fever, or one of many days, was caused, a little of the thinner blood being heated, and the rest onely put into confusion. In some that had an ill disposition of the blood, or a bad habit of body, it turned into a putrid and mortal Fever. The Cough with a Catarrh that accompanied this Fever, had its original from a ferous humour, that had been long gathering in the blood, because transpiration was stop, and then, upon the rising of an effervescence, sweating out so much the more, by the small Arteries, that open inwards: For when the Pores are stop, the superfluous ferosities, that were used to evaporate outwards, are by nearer purification of the blood poured inwards upon the Lungs: Which is the reason that a Cough is for the most part raised upon taking a Cold, that is, upon transpiration outwards being hindred. As to the Cure, when this Disease is but slight, its Cure is for the most part left to Nature; for this Fever, since it is onely a simple Continant, uses to end within a few days in sweat. Wherefore after a plentiful sweat, the heat and thirst, weariness and dull pains are done usually about the third or fourth day: Then the Cough continuing a little longer, does ever after by little and little decrease. If the Disease be more thoroughly fixt, it must be cured according to the rules that are observed in Putrid fevers, but with this difference, that because transpiration hindred, and the pouring of the ferous humour into the Lungs are in fault, therefore Diaphoreticks and Thoracicks are of more frequent use, for they hinder the flowing of the Serum out of the Vessels inwards, and either by opening the Pores convey it outwards, or by precipitating it from the blood, discharge it by the urinary passages: The Remedies therefore which are by fre-

quent experience vulgarly held to doe most good in this Disease, are Sweating and Letting blood. For when the Vessels are emptied either way, both the immoderate effervescence of the Blood, and the exuberance of the Serum are restrained.

Sylvius de le Boë, *Pr. Med.* l. 1. c. 30. calls them Catarrhagues, which come from a Catarrh, falling not onely on the Lungs, but on any other part, that moves and ceases together with the Ague fit; for a new humour falls not on the parts out of the Ague fit; and what is falln already, does not recede, or leave the part affected, although the Ague fit be over. And they are owing to the humours gathered by little and little in the Head, which are dissolved by the cause of the Ague being carried thither, and moved every way to their distillation and defluxion. The Catarrhs that are moved to their defluxion at the time of the Ague fit, require different Medicines, according as they consist of a different matter, and affect different parts. In general, their vicious quality must be corrected, their plenty abated, and the parts that are usually affected by them must be strengthened. Therefore thick and viscus Cararrhs must be attenuated and cut by Aromaticks: But ferous and salt ones must be tempered with oily things and Opiates: Thick ones must be evacuated with Phlegmagogues, ferous ones with Hydragogues: The parts affected, or like to be affected, must be strengthened against viscus and thick Phlegm by Aromaticks that are gratefull to them; against a salt Serum by glutinous things, both external and internal.

II. *Galen*, 6 de *Sanit. tuend.* 9. said right, that they who are obnoxious to distillations, are prone to many and divers Diseases, according to the imbecillity of different parts. For when the Brain it self has poured abundance out of it self, (*lib. de Carnib.* 17.) if the Patients have weak Lungs by Nature, and the Brain be weakened by a foregoing Fever, and made fit to produce matter for a Catarrh (wherefore *Galen* 3. de *Sympt. Caus.* 4. said, that a Catarrh is caused, when the Brain being either too much cooled, or over hot, is weakened, and so concocts badly, and breeds much Excrements, to which the retentive faculty is forced to give way, whence on necessity a fluxion to the lower parts is raised, which falling on the Lungs causes a Cough,) sometimes a far greater quantity of the Catarrh falls upon the Stomach and Mesentery by the Gullet, than does upon the Lungs by the Wind-pipe: And this being kept a long time in the Mesentery, and not ventilated, often conceives a putrefactive heat, and raises a Fever, obstructions giving no small help to the putrefaction, together with the defluxion, which maintains them. And it is not to be doubted, but Vapours are carried from the lower natural parts by the Veins, and spaces into the Head, and crudities also from the whole venous kind, which circulation is accounted the worst by *Hippocrates*. Nor let it seem marvelous to any Man, that this Fever must be called a Putrid, but not a Humour Fever; since *Galen* called the watry spittle of the Aliment, and the ferosities that distill from the Brain, excrementitious humidities; but he would never call them Phlegm, because it is a juice declining a little from the perfection of blood: But this juice of the Brain, or improper Phlegm, is an excrement of the third concoction, and therefore should not be reckoned among pituitous humours. And there are other Putrid Fevers that are not humoral, as such as proceed from some inward Ulcer; yet they must all properly be called Symptomack. For the cure of them, first of all, the first ways must be cleanted. Secondly, Obstructions must be opened. Thirdly, The febrile heat must be moderately allayed. Fourthly, The venous kind and Head must be gently purged. Fifthly, The hot and moist intemperature of the Head must be qualified. And lastly, the Distillation must by all means possible be diverted from the Wind-Pipe and Gullet.

Febris Colica vel Torminalis, or, *The Colick, or Gripe-Ague.**Its Description and Cure.*

There are now and then some Agues observed, which may be called Colick, or Gripe-agues, from the most grievous Gripes of the Belly, and racking Distensions of the same, coming and going with the Ague fit. They are caused by the Pancreatic juice, made more sharp and austere by its stagnation, and exerting its Acrimony sometimes upon the small, sometimes upon the greater Guts likewise: With which, if viscid phlegm and bile, but moderately sharp, do concur, wind is raised, which, together with the Guts, distends the *Abdomen*, and create a violent Colick pain, companion to the Ague. The following mixture will be good for these Agues; Take of Water of Mint 2 ounces, *Vite Matthiol.* 1 ounce. Or, Take of Tincture of Cinnamon half an ounce, Oil of Cloves 6 drops, Syrup of Scurvygrafs 1 ounce. Take a Spoonfull now and then.

Sylvius de le
Boë. *Prax.*
Med. l. i. c.
30.

Febris Colliquans, or, *A Colliquating Fever.**The Contents.*

Whether Cold Water may be given for prevention in a Malignant one? I.

When it must be given? II.

The Diet. III.

The Observation of Diet, and drinking Cold Water better than Medicines. IV.

I. BECAUSE all things are reduced to Colliquation alone, therefore we must insist on it, not indeed by drinking Cold water, which *Aetius*, *Paulus* and *Oribasius* gave for a Colliquative fever, but rather with binding and thickning remedies, that are endued with a subaptick faculty, such as *Terra Sigillata vera* to a scruple, and so *Bole Armenick*: Also ten or twelve grains of Emerald Powder. All of them must be given in Plantain-water and Juice of Quinces. And upon urgent necessity we must proceed to Opiates by degrees; and first of all we must use Syrup of Popy, then *Laudanum*, and last of all new Treacle, reformed with Pearl. ¶ But in a burning Colliquative fever, where there are two Pathognomick signs, Burning Heat and unquenchable Thirst, drinking of Cold water seems to have the chief place; and the reason is, because it is a Remedy both for the Burning and Colliquating febrile Heat.

Fortis de
Febr.

Idem.

II. *Galen* reduced all the conditions requisite to the drinking of Cold water to three, goodness of Strength, signs of Coction, and a most violent Burning fever; which last condition serves for the Indicant, Strength for the Permittent, Coction for the Prohibent. Nevertheless, no manifest signs of Coction appearing, we may presently give Cold water, after *Averrhoes* his example, who gave Cold water, not waiting for Coction: For, said he, the Patient may die dried up before Coction; and we may say, Colliquated and consumed. It may be given therefore, but not in such a quantity, as to fiske the innate Heat, that is, not above five or six pounds at most: And the day following, instead of it, distilled Waters of the Juice of cooling herbs may be given.

Idem.

III. *Hippocrates 4 de rat. viſſ.* teaches, that the Diet should be cooling, and moderately astringent, and thicker a little than the Disease requires; who, treating of the Cure of Fevers, with a Looseness waſting and consuming the Body, taught, that cooling and thick Broths should be given them, and, notwithstanding their *delirium*, he orders them to drink a little more vinous and astringent drink. Whence we gather, that such a Diet must be given, as may relieve the dissolution of the Body, though it may seem to add to the Disease and its Symptoms. And things that hinder the dissolution of the Body are threefold; to wit, things that respect the Body, and the Humour, and them both: They belong to the first, which afford much nourishment to the Body; and are easie of digestion: Things that are potentially cold, to the second: And whatever cooling Viſuals partake of an Astringent virtue, to the third. Therefore in Colliquating fevers, that is the best food, which nourishes, cools, and binds moderately. So Bread soaked in the Juice of sowre Pomegranate is proper. Cold water is a most proper drink and Medicine, as it respects both the Body and the Humour.

IV. Farthermore, we must know, that a right administration of Diet, and drinking of cold Water is the best remedy, and Medicines doe little good; Wherefore we must be very carefull, that the food be of good nourishment, and easie digestion, with which we must mix things that may cool and bind a little; for things that are very binding are therefore improper, because they keep the morbid cause within the body, seeing they obstruct all the ways for evacuation. And the best food that I know, is Barley-Ptisan, made in the manner following; Boil two well-fleſhed Pullets with three handfulls of French Barley, and one of Purflain; a little before you remove it from the fire, put in one pugil of the Kernels of a sowre Pomegranate, *Brudus de viſſ. Febr. 4.* let it boil till the Barley burst, and when you have put a little Sugar to it, let it be given to them *l. c. 21.* whose strength is brought low.

Febris delira, or, *The Doating Ague.**Its Nature and Cure.*

AS Continual Fevers, so Agues frequently occur, which may be called Mad or Doating-Agues; the *delirium* appearing seldom indeed during the cold Fit, but often when the hot Fit is on a Man. Which, that they should be attributed, the Fever being sharp enough of it self, to the Bile, made yet sharper upon its meeting with the pancreatic juice, which causes a new Ague-fit, other Symptoms commonly concomitant do evince. Those things will cure, which both powerfully and gently correct, and temper the acrimony of the bile, such as are especially Oily things, Emulsions and Opiates within and without.

Sylvius de le
Boë. *Prax.*
Med. l. i. c.
30.

Febris

Febris Dysenterica, or a Dysenterick Fever.

Its Description and Cure.

IN the beginning of Autumn, in the year 1669, when the Bloody-flux raged, a certain Fever arose with it, which was very like that Fever that usually attends Dysenterick persons, which indeed seized not them onely, who had had the Dysentery, but those that had been wholly free from it; For it had the same manifest or apparent Causes, which a Dysentery has, and the same Symptoms for all the World, which accompanied the Fevers of Dysenterick persons: So that if you do but except the Stools of people in a Bloody-flux, and the said Symptoms which necessarily depend on them, the Fever seemed wholly of the same nature with the Dysenteries themselves. Therefore I called this a Dysenterick fever: It sometimes began with Gripes, but moderate ones, or sometimes they came a little after it, but often there were no Gripes at all.

For the cure of this Disease, after I had observed that the Phenomena of the Fever of most Dysenterick persons were the very same with them that accompanied the Solitary Fevers of this year, it seemed consentaneous to me, that my Patients might be cured, if I did in some measure imitate that evacuation, by which Nature uses to throw off that corrosive and sharp matter, which is the continent cause of the Dysentery it self, and of the Fever that attends it. And therefore I encountered this Fever in the very same method, both as to Bleeding and repeated Purging and Cordials, as I used in the cure of the Dysentery above. Except that I found, that Paregoricks given between the Purges, did not onely doe no good, but that they did harm, otherwise than in the Dysentery, because the Matter was detained by them, that should have been carried off by Purging. The Patient lived for the first days of the Disease upon Oatmeal and Barley-Grevel: His drink was small Beer a little warm. And after I had Purged him once or twice, I saw no necessity to forbid my Patient a little Chicken, or some such meat, easie of Digestion, since this curing of him by Purging may allow it, which could not be granted, if we went another way to work. The third Purge for the most part, one day being always interposed, made an end of the Disease: Yet this did not always hold good, but sometimes more were to be used. If, when the Fever was gone, the Patients strength was broken and feeble, and they recovered slowly (which frequently happened to hyterick persons) I endeavoured to restore it, and to recall the Spirits that were run away and dissipated, to their deserted Stations, by giving Laudanum in a little dose: but I rarely repeated that remedy, nor ever prescribed it, till two or three days after the last Purge: But nothing made so much for renewing the strength, and refreshing the Spirits, as a free use of the open Air, presently as the Fever was departed. And I took the occasion of insisting on this practice from hence; In the beginning almost of this Constitution I was called to a young Woman, lying sick indeed of a Fever, and almost killed with a most bitter pain in her forehead, and with other Symptoms, with which we have already said, that this Dysenterick fever was loaded. When I enquired of her, in what manner the Fever first took her, and how long she had had it, she confessed, that fourteen days agoe she had been freed of a Dysentery; to which, either going away of it self, or forced away by help of Medicines, the said Fever forthwith succeeded with an Head-ach: Which I did conjecture I might be best able to prevent, if I

substituted another evacuation instead of the Dysentery, very like that, upon stopping of which the Fever arose; and therefore I restored her in the method before recommended. And the Fevers of this Constitution did most readily yield themselves to this method. In young people, and sometimes in those that were a little elder, this Fever now and then got into the head, upon which they grew delirious, not indeed as in other Fevers, after the manner of a Phrensie, but they were struck with a Stupidity, which came very nigh a Carus. This happened to them, above all the rest, who had in any sort, unfortunately employed themselves in ex-torting Sweats.

Febris Ephemera, or, An one-day Fever.

The Contents.

Whether the Bath be proper? I.
Whether Diatrion pipereon be proper for one bred of Crudities? II.
Whether drinking of Warm water be proper? III.
Whether Oxymel be good for an imputrid Continent? IV.
Whether drinking of Cold water be proper? V.
It cannot be safely cured without Blood-letting? VI.
A Man may Bleed till he faint. VII.
An Ephemera from constipation of the Skin, cured by Hy-droticks. VIII.

I. WHETHER is a Bath proper in one-day Fevers? For the resolution, we must know, that a Bath of Sweet-water may be considered in respect of its divers parts, whereof Galen, l. 10. method. enumerates four. 1. The Air of the Bath, by virtue of which Sweat is raised. 2. A seat of hot Water. 3. A seat of cold Water. 4. That part of it where the Sweat is wiped off. But since the causes of one-day Fevers are various and divers, we must take notice, that the hot Air of the Bath is proper for those Diaries which are caused by the closeness of the Skin, obstruction of the Pores, or swelling of the Glands: But it is hurtfull for those that are caused by commotions of the mind, by weariness, heat of the Sun and the like: A seat of hot Water may more safely be used in every Diary: A seat of cold water cannot be granted without caution: But then it is proper for every one to wipe off the Sweat. Foresius his limitation laid down, lib. 1. obs. 6. must be observed, that all these things may be proceeded on in an Ephemera, as such: For where Obstructions, internal Crudities, Loathings, Catarrhs, Loosness, &c. occur, we must abstain from Baths. We must take notice also, that some Modern Physicians have substituted other remedies instead of Baths, because we want that provision which was familiar to the Ancients: And farthermore for this reason, because most people are delinquent in their diet, and hereupon heaping up of crudities renders their bodies unfit for the use of the Bathe.

II. Galen is found fault with by Trallianus for prescribing meth. med. c. 5. Diatrion pipereon simplex, where, when the body is costive, crude aliment is lodged in the Stomach; and 4 de sanit. tuend. for giving it in a nidorous crudity, which is proper neither on the account of the Fever, nor of its cause, which is the effect of an ever intense heat. But Galen's design is, to provoke the expulsive faculty by a Medicine endued with such acrimony, to the end that the corrupt aliment may depart to the Guts, and what crude remains, may be farther concocted and digested.

Idem.

digested. Besides, if it be given, when the Body is Purged, it does no harm, because its heat is extinguished in the first ways, and goes not into the Veins, but in the mean time it strengthens the weak Stomach.

Primirosius, de Feb. l. 1. c. 5.

III. *Traillianus* his Medicine deserves notice, who commends drinking of warm Water, where Meat is in the Stomach; for it wathes, cleanses, and drives the Meat into the lower Belly, it tempers the inflamed Spirits; and he says, he knows not a better remedy: and truly it is an excellent one.

IV. *Ozymel* is suspected by some, upon the account of the Honey, whose heat seems hurtfull for several persons, because it easily turns to choler: But it is truly agreeable, because it dissolves what is thick and glutinous, and opens obstructed passages. Besides, all things should be considered in it, of which it consists, and not the qualities of the Honey onely should be considered (which by *Quercetan*, *Pharm. Dogm.* c. 10. is preferred before Sugar, as being more pure and defecate; for Sugar, if its sweetness be not corrected, easily turns to bile and obstructs the Bowels by its viscosity) but also the vitriolate quality of the Vinegar joined with the watry humidity, does so abate the heat of the Honey, that its deterfive and aperient virtue is apparent without any remarkable heat. The fretting of the Guts, and raising a Cough need not be feared much, if there be but a moderate quantity of Vinegar.

G. Horstius.

V. It is a question, whether drinking of cold Water be proper in an imputrid Continent fever. But we must observe, that when *Galen* forbids drinking of cold Water, before signs of coction, it must be understood of putrid Fevers: for in this Fever, that is, void of putrefaction, it may be given even in the beginning, so there be the conditions requisite, absence of obstructions in the Bowels, of a Phlegmon, of a weak Stomach, &c. But according to *Riverius*, since this sort of Remedy is become obsolete, and it is scarce possible to observe all the conditions, and that mischiefs arise from the preposterous use of it, it is better to doe the business by safe means.

VI. The second greatest remedy for Continent fevers is drinking of cold Water, which *Galen* omitted in curing that young Gentleman, 9 *Meth.* 5. because Bleeding alone was sufficient: But this Remedy would be pernicious to one that stood in need of plenteous Bleeding, because by incrassating the Plenty within the body, it would stop and stiffen it: And the innate heat, being as it were stifled by much thick blood, would be quite smothered by drinking of cold water. When yet some hæmophobic Physicians have falsely thought, that drinking cold water was a Remedy that might be substituted to Bleeding, although without taking away blood it cannot be administered. So that Bleeding indeed without drinking cold Water, may be admitted; but drinking of cold Water without precedent Bleeding cannot.

Fortis l. de Feb. p. 4 & 5.

VII. Blood may be taken away in a Continent fever, to fainting, whatever *Averroes* talks against *Galen* and *Hippocrates* himself. It may be he does not distinguish Fainting from Swooning, as *Galen* l. de S. m. c. 12. has distinguished, saying, That while blood is taking away, to fainting, we must be attent to the change of the Pulse, lest they fall into a Swoon. By this evacuation the redundancy of the hot blood is diminished, the whole body cooled, and reduced to its natural temper, whereby Nature being relieved, is able to expell and separate the rest.

Idem.

VIII. Many who have been wet in the Rain fall sick, and especially into a Continual fever, transpiration being stopt, which is very apt to cause Fevers. After Bleeding, I found nothing better, than to open the Body with a Sudorifick Decoction; Take *Sassa Parilla* 1 ounce, Seeds of *Carduus Benedictus* half an ounce, Leaves of *Scabious*, *Marigold*, each

half an handful. Make a Decoction of them all, which must be taken very hot with a little White-wine, or a few drops of Treacle-water. I have seen some Physicians, who did not in the least dream of Sudorificks, but when they observed the effects of our Potion, they commended it.

P. Pachecus in obs. Riv. rii 61.

Febris Epiala, or, A Fever, in which a Man is sensible of Heat and Cold all over his Body, in the same part, and at the same time.

The Contents.

What form of Diet must be observed? I.

Its Cure. II.

What sort of Aperiens are proper? III.

I. They are deceived, that think, there should be a thinner Diet in an *Epiala*, than in a simple Quotidian; Whereas the Diet should be fuller, and the reason is, because in a Quotidian sweet Phlegm offends, that by farther coction may be converted into blood and nutrition; which can never be expected from vitreous Phlegm. And the same way must be taken in all other preternatural sorts of Phlegm.

II. *Sylvius de le Boë*, *Prax. lib. 1. cap. 30.* judges *Epialas* to be double Agues, but both caused by a sharp Pancreatick juice, and a sharp bile; And so indeed, as that the Cold of one continually meets with the Heat of the other, and a new fit of the former, and the Cold, returns, when the heat of the latter is augmented, and he prescribes Medicines compounded of the foresaid subcontraries, which respect both the Phlegmatick and Cholerick humours, that abound in the same Patient. Let this mixture be for an example; Take of Water of *Carduus Benedictus*, Succory, each 1 ounce and an half, simple Treacle Water, distilled Vinegar, each 6 ounces, Powder of Crabs-eyes, half an ounce, Syrup of the five opening Roots 1 ounce. Mix them.

III. There is this property in all these Fevers, to wit, that all things which dry as well as heat, are inconvenient for these Fevers, because they make the matter thicker, the thinner parts being digested into exhalations: And seeing Physicians assert, that the matter of these Fevers is thick humours, which cause both Heat and Cold at once, they seem not to advise very wholesomely, who give such Feverish Persons Broth of Vetches, and Brine: Certainly, it were more proper for them to use things, which being moist, may also cleanse and cut.

Brudus de visu Febr. l. 3. c. 25.

Febris Erysipelatosa, or, A St. Anthony's Fire Fever.

The Contents.

Its description and cure: I.

It has affinity with a Pestilential Fever. II.

I. This Disease seizes any part of the Body, and that at any season, and the Face above all other parts, and especially at the latter end of Summer; at which season often the Patient is taken, as he is abroad in the open Air. For the Face is swelled on a sudden, the Swelling begins with extreme heat and redness, and is thick beset with small Pustules, which, when the Inflammation is farther increased sometimes run into Blisters: Then it

it creeps farther over the Forehead and Head it self, the Eyes in the mean time being quite covered over with the Swelling. (The Country People call it Blasting) nor indeed is it made different from those Symptoms that attend the Stinging of Bees or Waips, but that there are Pustules. And such is the most known and vulgar sort of *St. Anthony's Fire*.

But what part of the body soever this Ail seizes, as also at what time of the year soever it comes, Cold and Shaking, unless they go before (which sometime falls out a day or two before) for the most part accompany this Inflammation, as also Thirst, Restlessness, and other signs of Fevers. In the process of the Disease, as the Fever first caused pain, Swelling and other Symptoms (which increasing every day, sometimes end in a Gangrene) so these in their turn contribute no small share to the increase of the Fever, till both of them be extinguished with proper Remedies.

And there is another sort of this Disease, though more rarely occurring: This invades a Man at any time of the year, and that usually for this reason, to wit, because the Patient has given himself to drink subtle and attenuating Wines a little too freely, or some such spirituous liquour. The Fever, which leads the Van, is attended by the breaking out of Pustules almost all the body over, which resemble the stinging of Nettles, and sometimes rise in Blisters, and then striking in again hide themselves like little knots under the Skin, with a most biting and intolerable Itch.

Here I judge, the peccant matter mixt with the bloud should by right be evacuated, and the ebullition of the same bloud should be stopt with Remedies that temper it; and lastly, that the matter, which is now settled in the parts, should be got out and discussed.

That these things may be done, as soon as I come, I order a large quantity of bloud to be taken from the Arm, which indeed almost ever resembles the bloud of pleuritick persons. The day following I give the gentle Purging Potion, familiar to me in my practice, and at the hour of sleep (if perhaps the Patient have Purged too much) some Paregorick Draught, as *Syrupus de Meconio* in Cowslip-flower-water, or some such thing. When the Purge has done working, I order the part grieved to be fomented with the following Decoction; Take of the Roots of Marshmallow and Lily each 2 ounces, Leaves of Mallows, Elder, Mullein, each 2 handfulls, Flowers of Melilot, Tops of St. John's-wort, and Lesser Centaury, each 1 handfull, Linseed and Fennugreek-seed, each half an ounce. Boil them in a sufficient quantity of Water to 3 pounds. Let the Liquour be strained, and at the time of use add to every pound of the Decoction Spirit of Wine 2 ounces. Let some folds of thin Flannel be dipt in this decoction, and strained out, and then applied warm to the part twice a day, which after fomentation may daily be anointed with this following Mixture; Take of Spirit of Wine half a pound, Venice-Treacle 2 ounces, Powder of Long Pepper, Cloves, each 2 drachms. Mix them. Let a brown Paper, wet in this Mixture, be wrapt about the part.

Moreover, I advise the Patient to feed onely on Barley, and Oatmeal-Grevel, and roasted Apples; and also to drink very small Beer, and to keep up for some hours every day from his Bed. By this Method both the Fever and other Symptoms are for the most part quickly put to flight. But if not, I again breathe a Vein, which now and then must be done a third time, a day always passing between, to wit, if there be a bad disposition in the bloud, and a violent Fever. The days he does not bleed, I prescribe a Clyster of Milk, and Syrup of Violets, and cooling Juleps of Water of Water-Lily, &c. already mentioned in the cure of the

Rheumatism, to be used any hour of the day. But for the most part, once Bleeding, and a Purge following, if they be used in time, doe the business.

That sort, which resembles the stinging of Nettles, with an Itch, must be got away by the like means; but that this stands in less need of outward applications.

II. Certainly, in my judgment, we may see no obscure resemblance of the Plague, with that Inflammation, which the *Latins* call *Ignis sacer*, and we in our own Language *St. Anthony's Fire*. For this Disease is with sound Physicians, a continual Fever, deriving its original from the thinner part of the bloud, being corrupted and inflamed, from which, that Nature may free her self, she expells it to some external part of the body, in which a Tumour, or rather (seeing oftentimes no such remarkable Tumour appears) a red, broad, spreading spot, which they call *the Rose*, appears. And this Fever, after it has afflicted the Patient a day or two, ends critically in this Swelling, and furthermore there is sometimes a pain in the Glands under the Arm-pits, or in the Groin. And this Disease commonly seizes a Man as the Pestilence, with a chillness and a Feverish Heat following, so that they who have never had it before, think they are taken with the Plague, till at last the Disease shew it self in the Leg, or in some other part. Besides some Authours suspect, that there is something of Malignity in this Disease, and therefore they determine the cure to be in the use of Sudorificks, and Alexipharmacks. This flame indeed, when it has stirred up an Ebullition, by means whereof the particles of the bloud being slightly singed, and as it were blasted, are in a short time cast out, is extinguished of its own accord, without attempting any farther mischief.

Febris Hæmorrhagica, Hæmoptoïca, or, *The Bleeding, and Bloud-spitting Fever.*

Its Description and Cure.

SOME Fevers may deservedly be reckoned among the Intercurrent, which because some way or other they immediately make way for themselves, and end in this or that Symptome, are vulgarly not accounted Fevers, although originally they were truly such, and that affection from which the Disease borrowed its name, is onely a Symptome of the Fever, which is at last terminated therein; At present I shall onely take notice of two, Bleeding at the Nose and Spitting of Bloud.

Bleeding at the Nose annoys a Man at every season of the year, especially them that have a hot bloud, and are of a weakly Constitution, and that, more in Age than Youth. Usually, at its first approach, it makes some shew of a Fever, in that, while it makes its way, where it confined it, pain and heat in the Forehead do yet torment Men; the Bloud runs for some hours, then it stops a while, by and by it bursts out again, and so by turns, till at length being stopt, either by the use of Medicines, or of its own accord, because of the abatement and loss of a great quantity it wholly ceases; yet so as that the Patient may fear a Relapse every year, if he should happen to heat himself, either with Spirituous Liquours, or on any other occasion whatever.

This is the end I propose to myself, that the too great heat and ebullition of the bloud, whence the

said

said extravasation arises contrary to the usage of Nature, may be by all means restrained, and its violence turned another way. Therefore I frequently open a Vein in the Arm, and take blood liberally away, in colour ever answering the blood of pleuritic persons: I injoin a cooling and thickning course of Diet, as of Spring-water 8 parts, and one of Milk, boiled together, to be drunk cold; baked Apples, Barley-Grewel, and the like things, abstaining from Flesh. I order them to sit up from Bed a little while every day, and to take a lenient cooling Clyster every day, and not to omit it for one day. Moreover, the fury of the blood is restrained, as if it were bound with a Chain, by a paregorick draught of *Diacodium* at the hour of sleep.

But when a sharp *Lympha* accompanies such hæmorrhagies, as it often does, which being mixt with the blood, helps its motion, by opening the Orifices of the Veins, it is customary with me, besides revulsion and cooling, to give a gentle Purge even in the height of the Disease, whose operation when it is over, I give an Anodyne, a little stronger than ordinary, and when the Symptome is utterly vanished, I give another Purge.

Spitting of blood also, which in the confines of Spring and Summer seizes Men of a hot constitution, but not of a very strong one, and whose Lungs are not in very good order, also young Men above old Men, is commonly of the same nature with Bleeding at the Nose, seeing this is also a Fever, which parts with its name as well as essence, at the Crisis in which it ends, onely with this difference, that in the former Disease, the blood being too much agitated, makes its assault upon the little Veins in the Nose, and in this, upon the Lungs: And as in that, during the Flux, Pain and Heat they continually pierce the Forehead, so in this, both of them beset the Breast, with a kind of debility. Moreover, this Ail challenges to it self the same method of cure in a manner, which Bleeding does, but that it will not so well endure Purging, upon which, especially repeated, the Patient is easily cast into a Consumption: But Phlebotomy often celebrated, a Clyster given every day, *Diacodium* given at the hour of sleep, Diet moreover, and thickning and cooling Medicines, will doe the work, as you would desire.

Sydenham.

Febris Hæctica, or, A Hæctick Fever.

The Contents.

- The Knowledge of a Hæctick fever. I.
 Sometimes Bleeding is proper for Consumptive Fevers? II.
 Whether a Diet of contrary qualities, to wit, Milk, which is easy of digestion, and Crayfish, Cockles, &c. which are hard of digestion, may be prescribed? III.
 Things prohibiting the use of Milk. IV.
 Milk must not be given presently after going out of the Bath. V.
 Whey may be given. VI.
 The efficacy of Broth made of a small Chicken. VII.
 Whether drinking of Cold water may be allowed? VIII.
 A measure must be observed in Cooling. IX.
 A cold Bath, used by the Ancients, not safe. X.
 What way it becomes innocent? XI.
 Anointing must presently follow. XII.
 How many hours after eating Men may Bath? XIII.
 The Air must be cooled to the utmost of ones skill. XIV.
 The cure of a Hæctick coming from a semiputrid substance of some of the inner parts. XV.
 The Cure of one joyned with the French Pox. XVI.

I. Seeing in the beginning it is easily cured, but scarcely known, therefore a Physician should be very diligent in searching out the signs of one

beginning. *Sennertus* lays this down as an inseparable property, if an hour or two after Meal heat be increased, and the Pulse grow greater, and quicker, without cold or shaking, which are usual in Putrid fevers. The reason of the first Symptome is this; The Heat of Hæctick persons is fixt in the solid parts, wherefore little is excluded by them in form of Vapour: Whatever it is, upon the accession of moist meat, or subtile food, that is quickly distributed, it is increased by Vapours: Hence a small Sweat is strained out, and the Stomach is loaded with a certain compression, so as food is a trouble to it; that is, the Heat increasing, till there be a perfect distribution of the Aliment. But because it may so be, that in a Putrid fever, when no cold goes before, some exacerbation and increase of heat may follow a Meal, lest the Physician should mistake in his knowledge of a Hæctick, let him change the hour of his Meal for three days, and if the heat increase alike, the opinion of the Physician is confirmed.

II. Consuming fevers, yet without an Ulcer in the Lungs, may sometimes be cured, before they come to extreme Leanness, and if there be no hardness of the Liver or Spleen. The Man in *Oenadis* 5. *Epid. n. 2.* seems to have been wasted and consumed by such a kind of Fever; as also that Woman, from whom *Galen* took in three days 2 pounds and an half of Blood. And sometimes we have cured some of these Fevers by Bleeding, but never by Purging. We recovered a Boy about twelve years old, of a Hæctick fever, that had parched him for several months, and was beginning to have a Dropsie by repeated Bleeding and Purging with *Senna*: His Blood was most corrupt, that is, very black underneath, not concrete; above, very pale and tough, which swam upon thrice as much Serum. No Man more happily escaped a Consumptive fever by Bleeding, than Mr. N. After a Burning fever of twenty days he fell into a Hæctick, which had a nocturnal and putrid Fever, coming with a little Cold joyned with it: These had so consumed the Man, that you might have grasped either of his Legs, near the Knee, with your hand. I took ten ounces of most fæculent and very ferrous Blood from him: That very day his Putrid fever left him, the Hæctick continuing, which did him less harm: After eight days the like quantity of Blood was taken from him, out of the other Arm, which was very like the former: The Fever declined by degrees, and in three days left him.

III. Milk is prescribed by all Men, and deservedly: for Food of ease digestion is proper for Hæctick persons, because the innate heat is weak; and such as resists the febrile heat and driness, as Milk does. But if these qualifications be required in their Diet, Why are Crayfish also prescribed, which are accounted hard of Digestion? We must take notice that a two-fold Diet must be assigned to a Hæctick, according to the difference of time; For in one that is beginning, a grosser Diet and longer of Concoction is requisite, though it be concocted with difficulty, because at that time the native heat is stronger, and better able to overcome gross nutriment. If the Hæctick be far gone, and therefore the innate Heat, Parent of all Coction, be very weak, things hard of Concoction must be avoided, and those things given, which are digested without any trouble, and nourish well and quickly. Because the Heat being fixt in the solid parts, wastes much of the substance of the Body, which we must study to repair by thick and glutinous Aliment, but such as is also of a good Juice.

IV. Sometimes the more ignorant sort are deceived, who altogether forbid Milk, when Hæctick persons of the first or second degree are troubled with very small Obstructions of the *Hypochondria*, or with a slight Putrid fever: And in the mean time they

Botallus, l. de Sangu. missone, c. 17.

they do not see, that if Milk be not given, at least in a small quantity, they hasten to the third degree, whence follows Death. We say with Hippocrates, 5. Aph. 64. that it is bad to give Milk to them that have Obstructions, or are in Putrid fevers; But that it is far worse to suffer a Man certainly to perish: for we must have greater regard to the Urgency than to the Cause.

V. Hippocrates, 3. de viâ. acut. 54. writes, That it is not proper for him to bathe who is full either of Meat or Drink, lest crude matter be drawn out of the Belly into the Veins and Habit of the Body: Why therefore do the Physicians of our Age, if a spent Patient have but drunk Asses Milk, presently set him in a Bath? They will answer, To get it into the Habit of the Body: But we say, it will not be assimilated, when it is not concocted: Therefore that might better be done 4 hours after. And Hippocrates says, We must neither eat nor drink presently after Bathing; for when a heat is raised, the attractive virtue of the heat, takes away the opportunity of mitigating it. ¶ Yet Galen, 14. Meth. 15. 5. gives Milk to weakly persons after Bathing, and Trallianus gives Pissan.

VI. Galen also seems to confirm it, that Whey has its place in a Hæctick fever, when 10. m. m. c. 11. he says, that Asses Milk is proper above all other, because it is serous: Therefore Whey is most proper. ¶ Now I understand why Milk is due to Hæcticks, and the more serous, the more beneficial; and therefore Galen prefers Asses Milk before any other, not because it is colder, for upon that score Water would be more convenient, but because in Hæcticks the solid parts are consumed, which Whey, as it were their nourishment restores. For it is not the simple Vehicle of Aliment, as Antiquity deemed, but it self does nourish; for if it be set over a gentle fire, it grows thick, a most certain sign of Aliment. An Experiment of which matter being made an hundred times, I ever observed that the very Whey was not only thickned, but became glutinous and membranous, and hence I presently conjectured that the spermatick parts were nourished with Serum, &c.

VII. It must not be passed by, that 5 or 6 ounces of Broth of a small Chicken, when the Fat is taken off, may be beneficially given before Meal, that the solid parts may be moistened: So Plasterers sprinkle the Wall with water before they lay on the Lime, that it may stick the faster. Instead of this, some order Water to be drunk, but it is unfit to moisten the solid parts.

VIII. Galen, lib. de Marcote, and 10. Meth. greatly commends Water in the first sort, wherein the Humour only ferments, and is not as yet consumed, and while the Body, although it be hot and dry, yet abounds with Blood, and is full of Juice: For by the use hereof, Galen writes, he preserved many from a Marasmus and Consumption: And here Alexander's advice should be followed, who orders as much Cold water after Meal as the Patient will drink. But if a Hæctick happen from a Putrid fever, Crudity of Humours, or Inflammation of the Præcordia, drinking of Water ought to be avoided, especially if strength be low, the Inflammation moderate, and Coction do not as yet appear: But in a very vehement and urgent Inflammation, as an Eriphelaceous one, Cold water may be given, for the Inflammation will be extinguished, although the Disease be protracted a long time: But if a putrid one be joined with it, Coction must be expected: But in a Hæctick, which follows Burning fevers, or in a Marasmus it self, we must have a care of Cold water, lest in a fleshless and weak Body the innate heat be extinguished, over hasty Old Age brought on, which they call Age from a Disease, in which the innate heat is either none at all, or very little; therefore it requires not cooling but heating, moistning and restorative things.

IX. In the use of Coolers we must observe this, that the more powerfull be not immediately and frequently used; for they might extinguish a weak heat; and it is better to cool gradually than all on a sudden. But Moistners are ever safer than Coolers, because they perform their operations slowly.

X. Among external Remedies, a Bath of Sweet water is the chief; for it powerfully cools and moistens and relaxes the external parts, that they receive the aliment more readily: The use of it cold was most frequent among the Ancients, which is now grown obsolete, and not very safe; for there is fear that the Body might be hurt by the sudden meeting with Cold water: Therefore the readiest and most advised way were, to set the Patient in the Bath while the water is moderately hot, in which he ought to stay till it grow cold of it self. Observe, it is better to make them moistning by boiling emollient and cooling things in them, as Barley, bruised Almonds, &c.

XI. That the Patient may the better inure himself to the Bath, let him first of all try the steam, being wrapt in a Sheet, and being held by four lusty Men over the Kettle, in such a posture, as he may easily breathe, and the rest of his Body, that is wrapt up, may be sensible of the steam, through the Sheet. When this has been repeated several times, and the Man, after he has rested a-while, seems to have recovered his strength, let him be put in the water, and tarry therein as long as his strength will permit. Let the Servants take diligent care, that the Patient be tired with no stirring of his Body, but let them treat him so tenderly, that he may be at no pains, while either he rises out of Bed, or goes into the Kettle (near his Bed) or when he goes out of it, as he lies him down again. Nor do I see any reason, especially in this Age, why the Patient should be turned out of a warm Bath into a cold: Because Cold water ill affects the Nerves, not sufficiently fenced with flesh, nor should it ever be prescribed to any, but fleshy and young people, and in the midst of Summer (when it is good for this Disease.) It were better to anoint the Body with Oil of Roses, or of Water-lilies.

XII. Galen, 10. Meth. 11. propounds in the progress of a Hæctick a warm Bath, as he does a warm one, and then a cold one, when a Man is very weak and his Body thin and emaciated: which latter way of Bathing is more eligible, as it is safer, for the moisture is more easily insinuated in a hot Bath, and better kept, if cold water be presently poured on. Then, after gentle wiping and drying with soft cloths, we anoint with Oil of Almonds and Violets mixt together, anointing the whole Belly with ung. rosac. Mes. Besides, after a warm Bath, the distribution of the Aliment will be rendred much more easie: and it will be made much more efficacious, if it be altered with Leaves of Mallow, Violets, Water-lily, &c.

XIII. The Bath, as a thing that greatly moistens the whole Body, helps also very much the distribution of the Aliment, if it be done, when the Meat is digested, as presently after Meat it breeds Crudities, and after long fasting it weakens: Wherefore the Patient may be led to the Bath 3 hours after he has taken Milk. ¶ After Bathing one may not sleep, but rather take some sustenance: Galen therefore 14. Meth. 5. gives them that are weak Milk after Bathing.

XIV. Galen, 10. Method. cap. 8. in Summer time, when the Air is very hot, advises the Patient to live in some place under ground, which may be very cold, open to the Wind, and looking towards the North. With which Remedy alone I saw a Hæctick person, who was nothing but skin and bone recovered within a month. But when the Air is coldest, Galen advises to admit it, as it is drawn by respiration, which most cools the heat of the

Sanctorius,
Med. l. 15.
c. 7.

Hennius.

Rosinaccius.

Hieron, Bar-
batus, l. de
Sanguine &
Sero.

Zecchius.

Primirofius,
l. 1. de Febr.
c. ult.

Riverius.

Idem.

Joubertus,
l. 2. Prae-
c. 1.

Idem.

Idem.

Riverius.

the Heart; although it doe no good at all as it touches the Patient outwardly, lest transpiration be hindered: Yet we must note, that if the Hætick come from an Ulcer of the Lungs, a cold Air is not convenient on account of the Ulcer, but a temperate one in the active qualities, &c.

XV. There is a sort of Hætick that frequently occurs, which proceeds from a spoiled and semiputrid substance of the Lungs, Liver, or some other part; Some conflict with a slow Fever for 2 or 3 years, which is not known but by the Pulse after eating: This, because of the extenuation of the body, prevailing every day, and the diurnity of the Fever, is reckoned a Hætick by some: But yet it is cured by a moistning and cooling Diet, by Purging twice or thrice a month with Syrup of Succory, with Rheubarb, &c. and things that take off the hot and dry intemperature impressed on the Bowels. They that are thus affected are not troubled with a Hætick fever, but with a certain indisposition of the Liver, partaking of heat and dryness, implicated with obstructions of it and the Mesaraick Veins: Which obstruction keeps up a slow Fever, whence it comes to pass, that when the obstructions are opened and the hot and dry intemperature of the Liver altered, the Fever vanishes insensibly.

Enchirid.
Med. Pract.

XVI. If it chance that the Pox be complicated with an Hætick fever, you must presently take care to keep down the Pox, that the Fever also, together with the other Symptoms of the Pox may be removed, before the Patient become truly consumptive. And although the Atrophy of the whole may hinder the fulfilling of the intentions, yet this infers a difficulty but not an impossibility. And seeing this Quality is occult, it requires Alexipharmacks to extinguish it, which yet are not sufficient alone, but must be manifestly drying besides. Nor can it be taken away by strong Purges, as some have falsely imagined, and much less, when the solid parts are ill. Wherefore we must fly to the Pith of *Guaiacum*, as to a Sheet-anchor, and a safe Alexipharmack: which though it be hot and dry in the second degree, yet it is fat and oily, if it be but odorous, fresh and black: To which *Sassa* also may be added, as a thing which heats little or nothing, and attenuates and melts not onely congealed humours, but the dry, by softning them: *China* also may be admitted, to which notwithstanding we give little or no trust, because it quickly loses its excellent virtue. And let not the exceeding leanness of the whole deter us from the use of these things, when *Cardan* encourages us, who cured a pocky double Tertian, onely with the Decoction of *Guaiacum*: But *Scholtzius* more, who cured a pocky Consumption with a Decoction of *Guaiacum* and *Sassa*, as *Solenander* cured such another Hætick, which I have seen confirmed several times by my own experience. We must think likewise of the way how to doe it; for, I think, Sweat is necessary to attenuate, soften and carry off the putrid matter sticking in the solid parts: Therefore let a Decoction first be made, which may have a nutritive faculty: Take of choice *Sassa* 1 ounce, Pith of *Guaiacum*, fresh *China*, each 1 ounce; distilled Water of Sorrel, Borage, each 1 pound and an half. Mix them. Make an infusion for 24 hours. Then add half a young Chicken; let them boil gently covered, till half be consumed. Let the Colature be kept for 2 times, to be taken an hour before Sweat; Then take the remainder, leaves of fresh Endive, Borage, Sorrel, each 2 handfulls, pure Water 12 pounds, half a young Chicken. Boil a fourth part away. Then distill them in *Balneo Mariae*: for their usual drink. When an hour after eating is over, let the Patient sit in a Kettle full of hot Water, altered with Mallows, Melilot and Mercury or Pellitory of the Wall, and covered with Linen above: So let the Sweat be provoked, that it may not of-

send his Leanness, and that the putrid matter, infected with the Pox, sticking in the solid parts, and thickened, may be softened and melted, that so afterwards he may the better be carried to the Hot-house, which he must go into about 8 days after, yet he must make but little stay in it, and sweat rather in his bed, and when other 8 days are over, let him go into the Kettle, and let him prosecute it by turns for 40 days. This way of Sweating respects the Leanness of the body; and the infected matter to be carried off on a double account: Which, if it be thick, wants moistning, that it may be moved; and Phlegm it self, when it is thick, must also be moistned, that it may be rendered more tractable for motion and evacuation, as *Trallianus* observes, being so taught by *Galen*, who therefore gives store of drink to them that breathe hard: But because this putrid infection does perfectly indicate exsiccation, therefore it is necessary that the Patient sweat in a Stove by turns.

Fortis, l. de
Febribus,
p. m. 96.

Febris Hemitritæus, Horrifica, or, An Half-tertian or Shaking Ague.

The Contents.

What the Preparation of the Humours should be? I.

How we may help the Inflammation that accompanies it? II.

When Wormwood is proper? III.

What Diet is proper for a true one?

Whether Herbs be convenient? IV.

I. IN Preparation of the Humours we must proceed in such order as that Bile may first be prepared and lessened, and then Phlegm; yet alternately and by turns, that as much Bile as Phlegm, because they are equally peccant, may be prepared and evacuated; But, which is the chief thing, Preparers of Bile and Phlegm must not be mixt together at one and the same time, as if the Humours were mixt, as is usually done in bastard Tertians, and as many mistaken persons doe; for these are two different and contrary Humours, putrefying in two severall places, which we cannot with one and the same Medicine, compounded of Heaters and Coolers, correct both at once. ¶ *Julepium Aletosum* is very proper, as it respects both Humours, it being a thing that turns Choler into Phlegm, and it into Choler.

Fortis, l. de
Febribus,
p. m. 27.

II. The common Symptoms are Inflammations, inward or outward, which we must help, neglecting all other things. And if this be internal, revellents, repellents and alteratives are proper; and therefore Bleeding, application of Subtypticks, and inward Coolers will be necessary. But if they be external, through the translation of the humours, or a *Crisis* naturally procured by their settling; Or, if the matter by reason of long sickness be attracted to some part, it must be diligently observed by the Physician, that he abstain from all Diversion procured by Bleeding, and Medicines, especially Purges; but they must insist on slight Preparatives, Alteratives and Clysters. In the mean time the care of the part recipient lies upon the Chirurgion, that the Inflammation turn not to a Gangrene, the innate Heat in the whole and part being weakened by a tedious Fever.

Idem.

III. Wormwood must not be given before Cognition, because it causes loathing, the Humours being moved in the Stomach.

Rudius, l. 3.
c. 23.

IV. A true *Hemitritæus*, to wit, a Continual Quotidian, and a Tertian between whites, requires a more subtle Diet than is proper for interpolated Fevers, but a grosser one than what is convenient for continual Fevers from one simple Humour, because

cause it is longer than any one of them. And since Nature has a dispute with two Humours contrary both in quality and substance, she stands in need of strength and time to conquer them both: therefore upon both accounts, namely, that she may continue a long time, and that she may have strength against both her enemies, she has need of more ample Alimony. We must mix therefore either such things as may repress the Qualities of the peccant Humour, together with the Meat, and of contrary Qualities, or we must use temperate Meats: One may not administer such things as respect onely one of these things; for the Physician must be carefull of both Fevers. I call that meat temperate which suffers onely from the natural heat: You may apprehend that this is not fit for them that are sick of a *Hemitritæus*; because the Blood must of necessity have a bad quality, which is bred of it in Fevers: for in the Tertian the part effective of the blood is out of its natural temper, that is, hot and dry, because of the heat and sharpness of the putrefying Bile: Wherefore temperate meat, by reason it suffers onely from the natural heat, and cannot by contrary qualities correct the intemperature of the part, will be affected with them, wherefore the Blood which will be bred of it, will grow hot and dry according to the intemperature of the part, which will in a moment immediately be turn'd into Bile. The like judgment may be given in a Fever which has its rise from Phlegm, that makes the Body preternaturally moist; wherefore things must be mixt with the meat which are of contrary qualities, or that must be taken, in which both qualities are found, which I rather approve; but if moreover it be incisive, it should be chosen before the rest. Vinegar is one of those simple Medicines, which is remarkable for the foresaid qualities: For it is good for both the Humours; moreover it is endued with subtle parts, whereby it cuts, but if you mix this with any thing that is absterfive, you have that which we require. Sugar is one of those things which is moderately absterfive, and is convenient for People in Fevers. Wherefore you may reckon that a mixture of Sugar and strong Vinegar, which Physicians have named *Syrupus Acetosus*, is very convenient for a *Hemitritæus*, which you may use in this manner; Take of Time, Parsley, French-barley, each 1 handfull; stoned Raisins 1 handfull, the Bark of one sharp Radish, a little Salt: Boil them well with a fleshy Hen: Take 1 pound of this Decoction, as much sharp *Syrupus Acetosus* as will make it palatable; let them boil till they are mixt; give him to drink when he ought. Make Broth of the rest. Use this before a violent fit, and in its declination; but on the more moderate day use the same, and give the Patient the extremities of the Hen.

Brûdus, de
Vidu Febr.
l. 3. c. 2.

IV. One of the Arabians in a *Hemitritæus* feeds the Patient with Gourds, Spinage, Orache and the like: But he is mistaken, as I think, upon a double account, Of the very Nature of the body, and Of the Meat it self. Cold Meats must not be given at the hour when Nature is intent upon separation, lest they oppose Nature and repel the periodick expulsion the contrary way, which is made from within outwards, and stop the Pores, by reason whereof the fit will be made longer, as is manifest to them that diligently consider the nature of Meats, and search what they are able to doe at all hours. Hereto you may add, the Meats which are made of Herbs are obnoxious to corruption, because they breed a watry Blood, which soonest conceives an extraneous heat. It is therefore the wisest way not to give Meats of this nature, when the corrupting cause is strong.

Idem, ibid.

Febris lenta, or, A Slow Fever.

It arises from an evil disposition of the Blood.

THAT is reckoned among Symptomack fevers, which is vulgarly called Slow: They that are sick of it, are hotter than they should be, especially after eating, any motion or exercise; The Urine, for the most part is red, the Spirits are low, and Strength decays; they are indifferent well as to their Stomach and Sleeping, they neither cough nor spit much; but they waste every day, like consumptive People, and without any manifest cause. The Blame is generally ascribed to obstruction of some of the Inwards, through whose fault, the Aliment is neither concocted nor dispersed aright. But it seems to me that such an affection is founded immediately in an evil disposition of the Blood, whereby it inclines to an over salt and sharp temper, and therefore is rendred less fit for nutrition and equal circulation: for the Blood in the Heart, just like Oil in a Lamp, if it abound over much with saline particles, burns not pleasantly and quietly, but with crackling and great evaporation of parts, whereby it is sooner spent, and yields but a languid and weak light. Formerly I opened one who died of this Disease, in whom the Bowels designed for coction were well enough; but the Lungs were sapless and dry, and were beset all over with a kind of fabulous matter like Chalk: And oftentimes in this Disease the Mesenterick Glands are full of such chalky matter. But whether the salt blood first caused such Diseases of the Bowels, or the Dificrasis of the Bowels first infected the Blood, is uncertain: It is probable that one of them depends on the other, and the causes of either Disease are reciprocal.

Willis, de
Febr. c. 11.

Febris Leipyria, or, A Fever wherein the inward Parts are violently Hot, and the outer Cold.

The Contents.

Hippocrates his Cure by applying cold things is methodical. I. The Leipyria of the Arabians must be cured one way, that of the Greeks another. II. Whether cold things may be given to one coming from a Malignant humour? III. Whether Broth may be given? IV. Cordial Epithems are hurtfull. V. The Diet in the Leipyria of the Arabians. VI.

I. THE Cure of this Fever proposed by Hippocrates, l. de affect. v. 107. (it is proper for this, saith he, to apply cooling things outwardly both to the Belly and to the Body, to prevent Shaking) at the first blush seems foolish enough, as it orders Coolers, that is, Medicines actually and potentially cold to be outwardly applyed, because they seem highly prejudicial to the hot Internals and cold Externals: for being applied outwardly they drive the Heat inwards, whereby the Disease increases. But this Remedy does not want its reason: for whenever a bilious humour, burning in the Internals, causes a refrigeration of the extreme parts, and not the penury of the innate heat, cold things applied outwardly can doe no harm; yea, if they be often applied, the cooling virtue being communicated from one part after another to the internal parts, they may extinguish the internal heat of the Bile. Nor need the retraction of the heat be feared, because much Cold applied all at once

C c

once

once causes it, not what is applied by little and little, and endued with no intense Cold, such as he supposes must be used in this case, while he orders Shaking to be prevented. I can confirm the Authority of my Master by experience: For I have observed People so affected, that the more we endeavour to reduce them to their natural state by hot things, the more violently they were cooled. Above all others I observed it in N. who being in a burning Fever, and very cold in his external parts, after they that were by had tried for a whole day to heat him with Flannel and warm Skins applied all over his Body; yet in the evening we found him colder than ever. The reason is, Because if such refrigeration proceed from the penury of the radical moisture and spirits, if, while we strive to draw the moisture and heat to the superficies by heating things, we dissipate and draw it out, what wonder, if the Body be thereby more cooled? And if for this reason hot things do hurt, for the same reason, what things soever can dissipate more than hot things, must be so much the more suspected; for example, Frictions and Cuppings, which are in frequent use for the Cure of these Fevers.

Prosp. Martianus.

II. Avicenna reckons a Leipyria among Phlegmatick Distempers, ascribing the rise of it to vitreous Phlegm, while gross Vapours are elevated from it when it putrefies, which cannot be carried to the external parts, and make them hot: Or, because there are cold humours in the external parts, which cannot be made hot by the heat of the Phlegm putrefying within. In the Cure of it he uses Symplicium Acetofus, Oxymel, both simple and diuretick, to cut and prepare the gross and cold humour: He purges with Aloes, Hiera and Rheubarb; and so in short he lays down the Cure of an Epistaxis. By Galen it is reckoned among Burning fevers, and these malignant, and he says they are caused by an Inflammation or Erysipelas of some of the internal parts. Hippocrates also reckons them among Burning fevers: But every Burning fever has not this Symptom, onely such as is malignant and pestilential. Galen referred it amiss to a Phlegmon or Erysipelas of the Bowels, for I have seen several Malignant fevers wherein the out parts were scarce warm, and the inner were burning hot; yet, there were no signs and symptoms of the Bowels being inflamed. Therefore in my judgment there is a twofold cause of this Symptom; the first is, seeing the Nature of this Fever consists in a malignant poisonous quality and putrefaction, and that it is the property of all Poison to lay in wait for the Heart, because Nature, that she may defend a noble part and assist it, sends blood and spirits from every place to the Heart and noble Parts, whence by accident such refrigeration follows: The second cause is, because this Fever is caused by humours very much putrefied, lodged about the Præcordia, such as cruginous Bile, very much putrefied, the meeting of which when Nature cannot bar, she endeavours to evacuate them by Vomit and Stool, and therefore strives to do it with all her force, and thereupon a concurrence of all the Humours inwards follows. Hereto, I think, may be added the peculiar property of the malignant humours, to incline rather inwards than outwards. Here we must first give a Clyster; then bleed, and then use Coolers and Cordials, as Juice of Lemons, Citron, Pomegranate: Cataplasms of Barley-meal mixt with Juice of Houleek and the like Coolers, must be applied to the Hypochondria, and often changed. Finally, the same Cure is owing to this Fever, as to a burning malignant, those things being added whose property it is to resist Malignity. And we must remember from Hippocrates, 2. de Morb. l. de Affec. that we use onely Broths, till the Fever is over; for Drink we must give small Mede; we must purge onely by Clysters, not by any other Catharticks, before the Fever is gone.

Primitivus, l. 2. de Feb. c. 8.

III. Alteratives are very requisite in this Fever, so that Paulus and Aetius have affirmed that drinking of Cold water is proper; yet not in the beginning, but in the state, that is, when signs of Coction appear. And although Aetius gave Cold water to a certain Woman, without tarrying for Coction; yet it was an improper Leipyria, caused by an Erysipelas in the Stomach, whose proper Remedy is drinking of Cold water, as Galen, 9. Meth. 5. teaches. But in this case more willingly chuse some Alterative, which may not by its quantity oppress the innate Heat, but has a cooling and moistning virtue; such as are distilled Waters of Juice of Sorrel, Cichory, yea, and Water melon, which may be given to a pound and a half, adding 3 or 4 ounces of Scorzonera-water: Which Potion may be given 5 or 6 hours after the beginning of the Fever.

Fortis, l. de Febr.

IV. But that Heat may more easily come to the external parts, or at least that the Bowels may not be so grievously suffocated and afflicted thereby, it will not be amiss 3 hours after the beginning of the Fit, to give, not indeed Broth altered with Citron-feed, as it uses erroneously to be done, for nothing then must be offered which has the nature of Aliment; but 3 or 4 ounces of Cordial-water of totius Citri, Scorzonera, and Sazonie, may by and by be given, as was said, after some altering Potion, and then the Broth 2 or 3 hours after that; namely, of something altered with Cichory, Borage, Endive, Cinquefoil and Tormentil, adding Syrup de acido Citri, of Juice of Lemons, and a convenient portion of some altering Broth.

Idem.

V. It is an Errour in Physicians, who, when in Continual fevers the out parts are either cold or but warm, do presently flye to Cordials without distinction, applying Epithemes to the Heart, and giving other things which may produce much spirituous substance, by strengthening the action of the Heart. Which indeed in the refrigeration of the extreme parts, by reason of the internal heat calling the Blood and Spirits to the inner parts, are so far from doing any good, that they do a great deal of hurt: For, if we consider the Applications, they offend in two things; first, because they use things actually and potentially hot, whereas they should be actually and potentially cold: Secondly, because by their means the spirits are increased in the inner parts, which should be diminished: For while the vital spirits, that are diffused all the Body over, are by the virtue of the heat conveyed inwards, they so abound there, that there is imminent danger of the suffocation of the heat: And this abundance of spirits is made manifest by great and quick Pulses, which, when the spirits are deficient, appear small, rare and intermittent. Wherefore to endeavour the generation of spirits in these, is nothing else, but to bring an imminent danger of suffocating the vital spirits in the Heart, to a certain extinction of the innate heat. Wherefore we must then onely endeavour the generation of vital spirits by the foresaid Medicines, when the spirits fail, which we may know by the Pulse. Therefore the said Cordial Medicines must onely be used in that refrigeration, which derives its original from immoderate dissipation, and corruption of the spirits.

Prosp. Martianus.

VI. Seeing this Fever (the Leipyria of the Arabians) comes from one simple humour, as from a very gross Phlegm, which putrefying cannot warm the extreme parts, either upon the occasion of its thickneis, or small putrefaction, we must have recourse to Phlegmatick fevers, or Melancholick or Choleric, for the choice of a Diet: for it is the opinion of Learned Men, that it may have its original from each of these humours aforesaid. Wherefore the Arabian said well, You ought not (says he) to look to the Fits; for it may so be, that it may be a Quotidian, Tertian, or Quartan, or may have its period on the fifth or seventh day.

Brutus, de Vita Febr.

Febris

Febris Maligna, or, A Malignant Fever.

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I. I Think all that Malignity, which is found in epidemick Diseases (what such soever the specifick Nature of it is) does consist of, and is terminated in the hottest and most spirituous Particles of the Humours contained in Man's body that are more or less adverse to Nature; because onely such a sort of Particles are able to alter the Humours so suddenly as we see in Malignant Diseases. And, I think, those hot and spirituous Particles do act most by assimilating, seeing by the Law of Nature every active Principle makes it its business to procreate its like, and to bend and accommodate what things soever resist it, to its proper disposition: So Fire generates Fire, and one infected with a Malignant Disease infects his fellow, to wit, by emission of Spirits, which assimilate to themselves the Humours, that are presently infected, and lead and draw them to their own nature.

These things being premised, it certainly follows, that nothing can be better, than to cast out the said Particles by Sweat; for by this means the Disease may forthwith be utterly extirpated: But here Experience gainsays, and teaches that this cannot be done in every sort of Malignity. For although in the Plague it self the pestilential particles, both because

they are very subtil, and also because they reside in the most spirituous part of the blood, are dissippable, and may be cast out by raising an uninterrupted Sweat; yet in other Fevers, where the assimilating particles are not exalted to that Subtily, and also are incorporated with the grosser humours, the malignant matter is not onely incapable of being thrown off by Sweat, but is often increased by Diaphoreticks wherewith Sweat is raised. For by how much more these hot and spirituous particles are actuated by the use of heating things, by so much the more is that assimilating faculty, which they have, increased; and by how much the more these Humours are heated upon which they act, so much the more willingly they turn to the Assimilants side, giving way to their impressions. When, on the contrary, Reason seems to dictate, that those Medicines which are of a contrary nature do not onely stay the violence of the hot and sharp Particles, but also condense and fortifie the Humours, that they may be the better able to sustain the assault of the morbidick Spirits, but also break it. And here I must appeal to Experience, by which I am taught, that the Purples in Fevers and the black Pustules in the Small-pox increase the more, the hotter the Patient is kept; but that they usually decrease and grow less, upon a more moderate Regiment, which is altogether proper for them.

Now if any one ask me how it comes to pass, seeing the Malignity consists in such hot and spirituous particles, that frequently so small signs of a Fever appear, even in the most malignant Diseases? I should answer the Enquirer, First, that in the principal and most remarkable instance of Malignity, it is abundantly manifest, that the morbid particles are above measure so subtil and aculeated (especially when it begins first to invade) that they get into the blood like an Air, and blasting as it were its Spirits, they do not so much as raise it to an Ebullition, whereupon the Patient dies without a Fever.

But in that less degree of Malignity, which is found in other epidemick Diseases, the febrile Symptoms are rendered thus little conspicuous, sometimes from a confusion raised in the Blood and Humours by some inimicus Particles contained in their mass; whereupon Nature, being as it were oppressed, is unable to exert those more regular Symptoms, that are proper for the Disease, but they are all of them in a manner anomalous *Phænomena* by reason of the Oeconomy's being utterly overthrown and ruin'd; in which case the Fever often is low, which, the genuine duct of Nature obtaining, would be very high. Sometimes also fewer signs of a Fever shew themselves than is natural for the Disease to do, through a translocation of the morbid matter either to the nervous kind, or to some other parts of the Body, or to some humours without the liberties of the Blood, while the matter that caused the Disease was yet turgid.

But whatever it be, I cannot so much as guess what other method of Cure can be used for any Malignity, beside that which is proper for the Epidemick Disease, in which it is inherent. So that whether the Epidemick Disease be of the number of those which require first a concoction of the febrile matter, then a casting of the same off by Sweat when it is rightly disposed; or of them that seek a way for themselves by some Eruption; or of them that require a way to be opened for them by Art; in each of these kinds I say, Malignity, the Companion of the Disease, will stand or fall with the Disease it self, enjoying the same fortune, and departing in the same pace; and by consequence, whatever evacuation is proper for the Fever in general, the same is due to the Malignity; how contrary soever these evacuations be one to another. Therefore for that Malignity which accompanies autumnal Agues, as also a continual Fe-

ver, which is of the same nature, Sweating will be a Cure, which follows Concoction as its effect. A seasonable ripening the little abscesses will help the Malignity of the small Pox, and so of the rest, in all which that peculiar sort of Malignity is best conquered by those methods and means especially, to which the peculiar Diseases whereto it belongs, do most easily give way, whether you proceed in this or that method. Reason tells me this, unless I am mistaken: and Experience also strongly confirms it.

Sydenham.

II. There are several Differences of Malignant fevers: And we cannot determine from what cause they come unless we distinguish the Differences, and then inquire into their Remedies severally: Farewell therefore those Physicians, who endeavour to bring one cause for all these Fevers, when there are as many causes of Malignity as there are differences. Therefore the Physician, that he may find a Remedy, ought first to find out the specifick Causes, and from them a specifick Remedy. I find 8 Opinions, and mine is the ninth. 1. Of *Montanus*, who thinks the Malignity of fevers proceeds from putrefied humours in the Heart. 2. Of *Fernelius*, *Saxonia*, &c. who ascribe them to a poisonous quality. 3. Of *Capivaccius*, who thinks they may proceed from alimentary humours putrefied in the Heart. 4. Of *Fracastorius*, who derives it from a sordid and profound Putrefaction. 5. Of *Augenius*, who thinks it proceeds from Putrefaction with Corruption. 6. Of *Eustachius Rudius*, who says, it arises from violent Putrefaction, little differing from poison. 7. Of *Joubertus*, who believes that in them and Pestilential fevers the Blood putrefies, in other Putrid fevers it is onely kindled and inflamed. 8. Of them that think it is caused by some inward Gangrene. 9. Our own, that it may come from any of these Causes. The first Opinion may be defended from *Galen* himself, 1. *diff. feb.* 4. who holds that Pestilential and Malignant fevers come from humours putrefied in the Heart, or from putrid steams without the Heart, but affecting the Heart. The second Opinion is confirmed from *Galen*, 3. in 3. *Epidem.* in his fourth History of a Patient, who presently died frantick, as if he had taken a deleterious Medicine: Besides, seeing there is a Pestilence without a Fever, Malignity is not always caused by Putrefaction, for by how much greater the Putrefaction is, so much higher is the Fever. The third may be defended, because in a Malignant fever the Strength presently decays, which signifies that the Aliment changes its form, which change is usually made by Putrefaction. The fourth, fifth and sixth opinion, may be defended with *Galen* in many places, especially 3. in 3. *Epid.* and 1. *de diff. febr.* cap. 5. where he says that Malignant fevers are caused by Putrefaction. The seventh Opinion may be defended, because when the Blood is putrefied, the strength suddenly decays; where the decay of strength is a Character of a Malignant fever. The eighth is proved, because several times upon opening Bodies that died of a Malignant fever, I have found a small, very black Gangrene in the Liver. In this Case these 3 signs, propounded by *Galen*, 3. *de prasag. ex pulsibus*, are observed, 1. The similitude of the Pulse to a natural one. 2. Urine like that of men in health. 3. Want of a Fever, in the Judgment of the Patient, but some grievous Symptom attending.

Sanctorius,
de rem. inv.

III. Although a Malignant fever with *Exanthemata* come of thick Blood, Malignity putrefying; yet it is not so always, but, like most other Diseases, takes its difference from the matter, which is sometimes pituitous, sometimes bilious, and sometimes atrabilarious, according to which the cure varies. And sometimes there is a redundancy not so much of gross, as sharp humours, which Burning and Watching do indicate (for they who have Phlegm mixt withall, are oppressed by a Coma.) In such cases

it is the worst thing that can be to use Treacle, or Decoction of hot Herbs, how Alexipharmack soever they be, as of *Dittany*, *Scabious*, *Carduus Benedictus*, which yet are very usefully prescribed to Patients sick of the like Disease.

Vallesius.

IV. Bleeding is very convenient upon the account of the greatness of the Disease, hot intemperature and putrefaction: But there is need of great prudence in measuring the Quantity, seeing upon the account of the Malignity it rather does harm, for the vital faculty is much prejudiced by it, and they who upon taking Poison do bleed, usually dye. Therefore if the poisonous quality prevail over corruption, Blood must be taken away in less quantity, if Putrefaction prevail, in a larger: And to especially, if it arise from a morbid apparatus and putrid humours gathered within the Veins: and that chiefly, if there seem to be or to be imminent an Inflammation of some of the Inwards, which often happens. But Blood must be let betimes: For if the Disease have made any progress, and the Malignity be diffused into the whole mass of Blood, it does not onely do no good; but also greatly weakens Nature; so that most Authours think Blood must not be let, when the fourth day is past: Yea and seeing at different times they are of a different nature, arising from a different degree of Malignity, we must observe diligently what emolument Patients receive from Bleeding: For some sort of Continents, wherein the Putrefaction is more intense, and the Malignity more remiss, do abate much by Bleeding: But others, whose Nature consists in Malignity onely in a manner, are made more pernicious by breathing a Vein. Concerning the time and intervalls for repeating Bloodletting, observe that, if the Disease proceed slowly, Bleeding must not be accelerated; for the strength is spent before its time, and will not be able to hold out the whole Disease. Therefore as the Disease moves so Bleeding must be celebrated sooner or later.

Riverius.

V. It is determined by the wise Judgment of Doctors, that when Purple-spots appear, in the beginning of the Disease, and at those days when Bleeding uses to be celebrated, if a sufficient quantity of Blood have not been taken away before, even at that time Blood may be taken away in a moderate quantity, without any imminent danger: Seeing that Eruption, which is in the beginning of the Disease, is not Critical but Symptomack, arising from the exceeding Ebullition of the Blood and the ferment of malignant and putrefying humours: And therefore Nature's motion, which at that time is not, cannot be hindred: For if, when the Body is plethorick, and sends out a thick and red Urine, you do not let blood on the score of Spots appearing, Nature will scarce be able to conquer so great a quantity of Humours, and there will be danger lest they fall upon some inner part, and breed in it a pernicious Inflammation; yet, at that time Blood must be taken away with greater caution and in less quantity, not that the Veins may be very much emptied, whereupon a retraction of the Humours from without inwards might succeed, but onely that their too great fullness might be removed, which being taken away, the Veins do not attract new Blood, but they fall flat and grow a little frait, that they may be the better able to contain and rule the Blood that is left in them, and so the motion and expulsion of Nature to the superficies of the Body is helped: For Nature being eased of part of her burthen wherewith she was oppressed, expells the rest more easily. Which is well known to us in our practice, whilst often on the same day we open a Vein in acute Fevers, yea sometimes within a few hours after Bleeding, we observe plentiful Sweats, and those critical and wholesome, to break out; Yea and although Nature were strong enough to rule all the redundant Blood, seeing in Plethorick Bodies the Blood is usually

usually thick, and by such efflorescencies only the thinnest portion of the Blood exhales, the thicker Blood remaining would only putrefie more and more, and would render the Disease far more dangerous. Yet I think it most advisable a little after Bleeding, to apply several Cupping-glasses, to help the motion of the Blood outwards. In short, if this happen in the beginning of the Disease, and before the fourth day, at which time there can be no critical Eruption, if no relief follow upon it, but all Symptoms rather grow worfe, bleeding should in no wise be hindred: If after the fourth day a great quantity of Spots break out, the Patient be better, and Symptoms abate, instead of Bleeding several Cupping-glasses with Scarification may be applied, that Motion may be promoted outwards. And what has been said of Bleeding, understand it of bleeding in the Arm, which immediately abates the Quantity. Sometimes notwithstanding opening the lower Veins is very beneficial, if the strength be not able to bear farther blood-letting. It is beneficial especially to Women, even beyond the time of their natural Purgation: It is good also where a translocation of the humours to the Brain is feared. Opening of the hæmorrhoids also with Leeches does good, which is done with little loss of strength, revulsion in the mean time being made from the inner bowels, it is good especially for Melancholick persons.

VI. This generous Remedy ought to be administered immediately in the very beginning of this Disease, that is, while strength is good, and before the corruption and poison is got into the Blood. Yea, I prefer this one thing, that there is no Fever, in which relief is deferred with greater damage: nor perhaps is there any one Fever, which more deceives ignorant Physicians; For when Bleeding is deferred, the Blood being already corrupt, I have observed that the cure is rendered almost impossible, by reason of the great weakness which appears all on a sudden before the height of the Disease. Furthermore, if any Disease can deceive a Physician, this is the principal, because this Fever at the beginning appears so mild, both in heat, and in all its accidents, that ignorant men slight it. But then afterwards signs of Death appear all on a sudden: for which reason it is necessary that the Artist be experienced, carefull and Learned.

VII. I think Bleeding in the lower Veins is far more beneficial than in the upper, especially if the *Menstrua* be stoppt, or the usual bleeding of the Hæmorrhoids suppressed; for in these latter cases it has no difficulty: But if they be wanting, I have observed in these Fevers, it is far safer to breathe a Vein in the Leg or Foot: For if it be the best way to draw the Poison from the Heart, no safer way can be thought on, than to draw to the lower and weaker parts. But some may say the abundance is not evacuated with that celerity out of the lower Veins, as out of the higher. I answer, 1. I cannot easily admit that, because, if I be not mistaken, the Veins of the Legs and Arms are equally distant from the *Vena Cava*. 2. Suppose there be a difference, it is exceeding small, but the utility, for the foresaid Causes, is far greater.

VIII. *Aquapendent* says, he will propose a Paradox, that evacuation by the Hæmorrhoids conduces more to the cure of Malignant fevers, than Bleeding in the Arm. He subjoins a reason: for the greater branches of the *Vena Cava*, wherein the peccant matter lies, may so be emptied. And I add, that while they draw from the sedal Arteries, it is very likely the Heart is wonderfully relieved thereby.

IX. Opening of a Vein may be omitted, when the strength is low, and there is no fulness of blood, or but a very little, and when it consists of the thinner part of the blood. Then, because the whole Body cannot be evacuated by opening a Vein, for

these contraindicating Causes, I should admit the use of moist Cupping glasses; by which we might advantageously evacuate that virulent Caco-chymie, which is mixt with the thinner blood.

X. In the Year 1648. an Epidemick, Malignant, Spotted fever raged, with great destruction, in which I often observed, that the frequent application of dry Cupping-glasses, and of Vescicatories, to the middle of the Limbs, and behind the Ears, did much good, even in desperate persons, and such as had a Lethargy or a Phrenzy. But if the heat or motion of the blood were over high, then you were to abstain from cupping and scarifying; for they were mortal, but the use of Cordials was very advantageous.

XI. It is the way of the Italians to apply Cupping-glasses to the lower parts, for revocation of the poisonous matter from the Heart to the most distant places: To the Shoulders and Back by no means, lest it be drawn towards the Heart from other places. But they are properly applied to all these places, beginning at the lower parts, for the foresaid reason: Which application, since it does not sufficiently draw the poisonous humours and vapours from the heart, and neighbouring parts, therefore it is of necessity made to the shoulders and back. Hear *Mercatus* his Opinion of them; *It is most advisable to scarify, where you set the Cupping-glasses to the Back, over against the Heart. Which Invention Practise has often shewn to be of such moment, that I have seen anxiety, inequality of the Pulse, and other most cruel Accidents, presently cease thereupon: Wherefore till you find the accidents of the Poison in some sort to abate, you must not leave off Cupping.*

XII. I had a Porter under Cure of a Burning, Malignant fever. When he was in great anxiety, I ordered Leeches to be applied to his *Anus*: but either through the negligence of the Attendant, or the ignorance of the Patient, they were set to his Paps, which falling off full of blood, gave occasion to copious blood-letting. When I came, I found the man recovered of his Disease, and I ascribed his succeeding health to this Remedy.

XIII. When one has been sufficiently bled in the Arm, opening a Vein in the Forehead is proper: he may bleed 6 ounces. Leeches may also be set behind the Ears, which indeed are an usefull Remedy, but not so effectual as the former, because the thinnest part of the blood only is drawn by the Leeches, when by a Vein of the Forehead sometimes in a Phrenzy more impure and corrupt blood is drawn, than from the Arm.

XIV. Vescicatories are condemned by some. 1. Because they encrease heat and burning. 2. Because by intervention of Pain they cause Watching. 3. Because they often hinder the critical motion of Nature to the Nose. I answer to the First, That they cause heat onely in the external parts, whereby the internal heat is abated. To the Second, That Watching and Pain come of themselves. To the Third, That they do not divert Nature from any wholesome purpose, because she endeavours no critical motion. But indeed they are necessary. 1. That the heat which is almost stifled may be refreshed. 2. That the poisonous matter, that is about the heart, may be attracted. 3. That the raging matter, rapt to the heart and brain, when it has a great urgency, and causes a *Delirium*, and makes the Pulse low, may be retracted to parts far distant. Vescicatories doe all these things as a present Remedy.

¶ Being taught by experience, I judged it a proper Remedy in this case, because I observed the internal heat was very great, when the out parts were cold, and most grievous symptoms of the principal parts were imminent, by reason of the malignant Evaporations of the boiling blood. By this means Revulsion is made to the out parts, in which respect the Physician imitates Nature, which uses to transfer Spots, Bubbles and Carbuncles, to the out parts in Pestilential fevers. ¶ Vescicatories applied to several

Augenius.

Petrus Borrellus, Cent. 1. obs. 60.

P. Salus Divertus.

Riverius.

Rolinc. Conf. 9. l. 4.

Horstius, l. 1. obs. 30.

Idem.

Augenius.

Rolincius.

Idem.

several Parts, do powerfully draw and make revulsion of the bad and poisonous *Ichores*. They are commonly applied to the hind part of the neck: for there they draw out the poisonous matter, and derive it from the head, and serve to cure comatous affections, which frequently happen in these Fevers. Yet where a great Malignity has seized the whole Body, and very cruel Symptoms are urgent, one is not sufficient, but several must be applied. In an exceeding severity of a Disease, I use to apply them to five places, namely, to the Neck, each Arm on the inside, between the Elbow and Shoulder, and to each Thigh on the inside, between the Groin and Knee, with good success.

Riverius.

XV. What Issues, Sores and Vesicatories are able to doe in preventing and curing Malignant Diseases, yea the Plague it self, has been already in some measure known since *Galen's* time, and is worthy of a more exact enquiry. In our climate, where the humours are for the most part gross, phlegmatick and dull, sometimes we observe present relief from Vesicatories, especially if they be applied before the seventh day of the Disease, to the inside of the Arms and Thighs, where the large Veins run. Yet there is a time when they are applied whole months to no purpose, yea sometimes in a whole year no sensible relief is found from them. The reason may be drawn from the difference of the Infection: When these Malignant particles stick not very fast, and do not embrace the tenacious moisture of the Body, they are more easily discharged by a Vesicatory, and the fugacious poison departs as the *Serum* breaks out: But when they reside in viscid matter, or are closely joined to any smooth matter, they commonly elude the force of a Blister. But how shall we know in what particles the malignity resides? To consider the constitution is not sufficient; for I have sometimes observed, that Vesicatories were very beneficial to phlegmatick persons, and that they have done no good at all to extreme choleric Men. They must be applied in season, especially when it appears by examples, that they have done good to others who have been sick in the same manner, near the same time. But if they fail your expectation, you must persist in Alexipharmacks, which must nevertheless be made use of.

Olaus Borrichius, *Alg. Danic.* 1676. p. 77.

¶ Since it is the ill custome of several Physicians, when Malignant fevers do rage much, if there be Head-ach and *Delirium*, to rely much upon the application of a Vesicatory, that I might be certain of the success, I enquired of several Chirurgeons, from whose report I understood, that most Patients died, to whom they were laid: And indeed I knew several who were so precipitated into their Graves. A plethorick young Woman, afflicted with a Continual fever, and Pain and a *Delirium*, by the advice of a young Physician, who made her a long discourse of the benefit of Blisters, had a Vesicatory applied to her Neck; a little while after she began to cry out and complain of a huge burning in her Head, and the next day she died of Convulsion fits. If a Lethargy or Drowsiness come upon one, to awaken him, and draw the matter from his Head, I think they should not be rejected; but not in the beginning or increase, when all things burn and are in a flame, and the Head is onely affected by consent with the lower parts. If one or two escape it is not so much by means of the Vesicatories, as of Nature or other Medicines.

Augustinus Thierus, *L. I. Obs.* 20.

XVI. It is much controverted among Practitioners. Whether one may purge in the beginning of Malignant Fevers? Many deny it, because of *Hippocrates* his rule, *Concocted not crude things must be purged*. And because in this Disease Malignant humours are too much stirred by Purgatives, they spread the Malignant quality farther, and sharply stimulating Nature, they cause a pernicious Looseness; when otherwise colliquating fluxes are usual in these Fevers, and for the most part mortal. Others con-

tend, that sometimes there is so great a quantity of bad and poisonous humours in the first ways, that unless it be quite taken away or diminished by a purge in the beginning, it will infect the rest of the mass of humours, that it cannot be conquered by Nature, how much soever she be fortified by Alexipharmacks. I think, in the beginning of this Disease we should abstain as much as can be from purgatives, for the reasons alledged before, and we should carry off by Clysters rather than by a Purge. Yet if the *Cachymie* in the first region be so great, that it is not likely it should be sufficiently carried off, the filth stagnating in the first ways, by frequent Clysters (which happens especially, when bad humours redound in the Stomach, and when there is a great loss of Appetite, bitterness in the Mouth, Loathing and Vomiting, or when there is store of Worms) it is the best way then to carry it off by a Purge, that the morbidick matter contained in the Veins may afterwards more commodiously be subdued, which matter indeed cannot be carried off before Concoction, and in this case onely *Hippocrates* his rule holds good, that *Concocted not crude things must be purged*. But the matter contained in the first Region, and the filth of the Excrements may be carried off, without any preparation or concoction premised.

Riverius.

XVII. As the giving of Clysters is not onely useful in the beginning of the Disease, but in the whole course of it, if the Belly be not loose of it self, that the daily excrements may pass, and some share of the morbidick matter may gradually be carried off, and that revulsion of the humours tending upwards may be made; so they become hurtfull, if purgatives be put in them, because they cause loosenesses, which are familiar to this Disease. They should be instead of an inward fomentation, not of a laxative Remedy. And although through the whole course of the Disease the Belly be loose, yet we must not leave them off, but use moderate Deterfives and Coolers.

Idem.

XVIII. I may safely say, that they throw Oil in the Chimney who give strong Purges in Continual fevers, especially where there is but the least suspicion of Malignity. Let the Doctors of Practical Physick be consulted, and their Observations, and you will be informed, that they that are sick of a Malignant fever, are for the most part unhappily purged, or you will find but very few of them that are unluckily purged, to be saved, and then it is by the strength of Nature. Nor according to Nature can it otherwise be, for what is purging but an artificial troubling and fermentation of the humours? as *Sennertus*, *Instit. Med.* 5. cap. 11. teaches. For what is a Continent fever else, and other fevers also, but a fermentation or ebullition of the Blood? And do you not finely cure the ebullition of the Blood by the fermentation of a Purge? It is quite contrary, seeing we must doe our utmost to stop this growing Malignity in a Continent fever, by reason of the fermentation of the Blood. And they doe far better for their Patients, who, at the very beginning of the Disease, order them immediately some approved, but not too violent Purge, with respect to each individual. Among whom let *Rulandus* appear first, who c. 6. de *F. Ungar.* says, *They that are easie to vomit, and whose strength is good, are sooner freed from the source of the Malignity, and are in less danger of the Cruelty of the Plague, when they have taken a Vomit; for by this the bad mass of humours is carried off, which for the most part gives a beginning to the worst Malignity, (witness the Heart-burn, tormenting most people) without any great loss of strength, and with less exagitation of the humours, than from the mildest Purges.* Let the famous *Hartman* follow *Rulandus*, who *Prax. Chymiatr.* p. m. 389. says, there is not a more successfull way found to cure Fevers, than that which begins with a Vomit. *Crato*, Physician to three Emperours, *Conf.* 275. commends the white flowers of Antimony for that purpose. And I must ingenuously confess, that as from the beginning of my

S. Pauli,
Digres. de
Feb. Malign.
Sed. 72, 75,
& 76.

my Practice I have ever been averse to *Gilla Theophrasti*, *Mercurius vita*, and such like strong Vomits; so with *Aqua benedicta Rulandi*, and with *Oxyssacharum A. Sale*, I have quickly, safely and pleasantly, several times cured both Tertians and Malignant fevers.

XIX. When there is loathing, and purging will do no good, according to the inclination of the humour, let Vomit be provoked by Art, to the end, that the impurities not onely of the first, but of the second and third regions of the Body may be cleansed. For if the Stomach, according to the Nature of the Sea, give to all, and receive from all, *Hip. 1. de Diet.* If by means of the Liver it be joined to all the parts of the Body, and receive their Excrements, according to *Galen's Doctrine*, and in a word, if the whole Body and the Stomach give and receive one from the other, *ex lib. 4. de morb.* who sees not that the most remote parts may be rid of the load of vexing humours by the Stomach? Nor is it amiss observed by *Aristotle 4. Probl. 7.* that very Weariness is cured by Vomiting, although the matter of it be far dispersed through the musculous kind. And especially soporated Patients awake upon taking a Vomit, whether the *Cataphora* be sympathick from the full and fuming *Præcordia*, or Idiopathick from the Brain being inebriated with the multitude of humours: for while the Stomach is rent with the Vomit, the Brain also is provoked, and by the common shaking and contention, the mass of humours oppressing both these parts is discharged: To these Reasons the Experience of several People in Fevers consents, who being slain into a *Cæcus*, incurable by other helps, have, by causing a Vomit, as by a Divine Wand, been recalled from the jaws of the Grave. But the question is concerning the choice of a Vomit, for some traduce *Stibium*, how artificially soever prepared, as *Stygian*: Others again adore the Infusion in white Wine, as the most august *Palladium of Apollo's Art*, on which all their hopes rely. *Hippocrates* in procuring a Vomit did very much use white Hellebore, which is poisonous and strangling; but since its correction is unknown to posterity, we have no reason to reject Antimony, as a safe *succedaneum* to it.

Menj. tuius
Dissert. 11.

XX. You will say, For what reason do Physicians, and especially Germans, give sweating potions immediately in the beginning of the Disease, when there is a thickness and crudity of the humours, and that to the manifest ease and relief of the Patient? I answer, That their intention is to draw out onely the ichorous part of the Blood, in which, as in the principal Subject, the Putrefaction is founded. For seeing the *Ichor* stagnates in all the Veins, even in the capillary, being mixt together with the Blood for penetration sake, as its conductor and inseparable companion, it is certainly most readily expressed and transcolated through the Skin by Sudorificks, because of its thinness. But do not think that they so relied on Sudorificks, as to abstain from all other Physick.

Joseph de
Medich.

XXI. Alexipharmacks must be very much varied and mixt, according to the various degree of Malignity or putrefaction, according to the different intenseness or remissness of the Fever, and the different Complexion, Sex, Age, and other Circumstances of Patients, left to the Physician's prudence. I onely will give you this caution, when the Fever is most violent, you must insist chiefly on Coolers and Acids, avoiding things hot and diaphoretick, which are proper, when the Fever is more remiss, and the malignant quality gives the most trouble. Alexipharmacks of the third class, Diaphoreticks, to wit, and Sudorificks must not be given but in the state of the Disease and declension, except some poisonous quality seem to prevail over the Putrefaction, chusing such things as are least hot. And there are various degrees of them: for some are hotter, as *Angelica*, *Zedoary*, *Dittany*, Treacle, Treacle-water, which should never be given, when the febrile heat is at the height, but then onely when it

is very remiss, and signs of Malignity very prevalent: But other things are indued with less heat, as *Scabious*, *Carduus benedictus*, Meadow sweet, *Scordium*, which may safely be given even in the height of the Fever. And these things should especially be distinguished in Practice: If the violence of the Symptoms be great, new Treacle may be convenient, because of the strength of the *Opium*, as yet prevailing, whereby the violence of the Symptoms is assuaged, and the heat of the humours restrained: Two grains also of *Laudanum Opium* mixt with Alexipharmacks, especially in the beginning or increase of the Disease, where Treacle is suspected, is very good: for by its narcotick and fixing virtue, the boiling Spirits, which are noisome to the Heart, are as it were coagulated, and the morbidick matter (which, while it is in flux, is most destructive,) is stopt, and remains in a manner unmoved; that afterwards Nature being not provoked, having gathered strength, may more easily apply the virtue of Alexipharmacks to her self. And a Physician should have divers Alexipharmacks in readiness, and should change them by turns, lest Nature be too much accustomed to one and the same thing constantly used, and should elude its virtue. Besides the nature of the poison is not always one and the same, but is very different according to the variety of Bodies, so that what does one good, will doe another none. If at any time Nature being oppressed and in a manner conquered by the malignity of the Poison, is able to doe nothing, but submits her Neck, as if her Hands were bound, any the strongest Diaphoreticks may be given in a larger Dose, that the depressed strength of the Heart may be quickened as with a Spur: Then Treacle-water or Bezoardicks, and such as are powerfull, and have a more penetrating virtue (which may be encreased by the addition of Camphire) must be used.

Riverius

XXII. Our modern Innovators, who endeavour to proscribe Gems, Pearl, Corall and all Cordials in general from medical use, and who cure all Fevers, even the malignant, onely by Bleeding and simple cooling Juleps, may be convinced at least by this experiment about Corall and Pearl, because if they be raduced to powder, and infused in Vinegar, juice of Lemon, Spirit of Vitriol or *Aque fortis*, they take away the Acrimony of these Liquors: Whence we may see that the same Medicines taken inwardly, do assuage the Acrimony and Malignant quality of the humours, and reduce them to a moderate quality. They that have tasted solutions of Pearl or Corall, made in juice of Lemons, &c. know this very well.

Idem.

¶ Here the futility of several Physicians must be reproved, who therefore vaunt the virtue of Pearl and Corall, for sweetening, as they talk, the churlishness of the Humours, because Vinegar, when a dissolution of them is made therein, grows sweet: For it appears, that the salt wherewith the dissolvent is imbued, is united to the Pearl, and the Liquor indeed is left sweeter, but the dissolved Pearl is made so sharp by the addition of the Salt, that after precipitation they stand in need of carefull ablutio. Suppose therefore the Stomach be infected with such Dissolvents, and that, after the dissolution of the Pearl that is taken, there be another humour in the Stomach answering to Oil of Tartar, whereby they may be precipitated, truly the Salt that is mixt with these dissolvent humours, when the *menstruum*, as is usually said, is gone, will be joined to the Pearl, and together with it will fall into the bottom of the Stomach, but there it will doe no less mischief, than formerly, because keeping its old acrimony, it onely changes its seat. But, which should especially be observed, the so highly extolled Magistries of Pearl, as without the Body they are not farther soluble even by the sharpest Liquor, so without doubt within the Body they can no more be dissolved by any humour, be it never so sharp. And then all these things signifie nothing

nothing to the humours that are in the veins far distant from the Stomach.

Menjottius.

XXIII. Diaphoreticks are much in vogue among the Germans, and *Paracelsus* highly commends this remedy in the Plague and Malignant fevers, and among other things an *Aqua vite* several times distilled, in such a way as that half the Phlegm may be left, which is thus tried, to wit, by putting a little of it in a Pewter Dish, and setting it on fire; if no fatness be left, let it be distilled no more; but if any be left, let it be distilled, till none remain, and give half a drachm of this in 4 ounces of warm Barley-water. To this purpose I have used *Elizir vite magni Duxis* and *essentia Theriacalis ejusdem* in the same quantity to 2 drops. Nor is there any reason why any one should reprehend the use of these Medicines, as being very hot, because the heat of them is easily dispersed, and penetrates to the principal parts, and carries off the infection of the humours by sweat, besides, we must use these hot things after taking of cold ones: for Malignant and Pestilential Fevers must sometimes be cured by virtue of the fire.

Fonseca, consult. 47. tom. 1.

¶ In a great decay of strength hot strengthening things need not much be feared, so as out of dread of encreasing the Fever, that we should be unwilling to deliver the Patient from imminent danger of Death, seeing we must always have greatest respect to what is most urgent: for when the strength of the Heart has been a little refreshed, what hot strengtheners have inflamed more than ordinary, may be afterwards qualified by violent Coolers, as *Sal Prunelle*, and Spirit of Vitriol mixt in Juleps and ordinary drink. This method observed by a prudent Physician, does happily succeed even in the giving of hot Alexipharmacks and Sudorificks. ¶ As to Bezoardick Medicines, which take away the poisonous quality of the humours, Treacle, Mithridate, *Confectio Hyacinthi*, without all controversy they are better than any other. Which, though in some Pestilential fevers they be disapproved, because they are hot, yet I have observed that more benefit than hurt is got from the use of them: Therefore *Galen*, in *Lib. de Theriac. ad Pisonem*, allows Treacle in Malignant and Pestilential fevers. Whose advice I approve, so the Fever be not of an exceeding Burning kind.

Riverius.

Zeechius, Consult.

XXIV. In Malignant fevers, before the breaking out of the Spots, you may sometimes observe the Hands of the sick far beyond the Wrist, or the Feet far beyond the Ankle, or both, to be discoloured with a colour strange and different from that of the whole Body, but momentary and fading: and sometimes they are very red: And such Patients do then complain of a great burning in their extreme parts, and ask for cold things, or some Crystal, although the rest of the Body be not so remarkably hot, which indeed is a mortal sign. But if the heat rage yet more in their Limbs, and gain strength, then the Hands of such feverish persons in two or three days space, without any other manifest cause, are consumed with such an Atrophy as usually appears in their hands that are wasted with the Consumption; you shall seldom observe that such recover, especially them whose Hands are black and blew, or of some dull colour. Of which thing I give this reason, following the example of the Excellent *Spigelius*, namely, That there are usually more, and more apparent Anastomoses of the Veins and Arteries about the extreme parts, as in parts remote from the fountain of Heat, and which therefore stand in need of more hot and spirituous blood: And hence it comes to pass, that the Blood which is evacuated out of the hand is much more fresh coloured and redder than what is evacuated out of the Arm, because the arterious blood is here also ever evacuated. By means of which Anastomoses that admirable Circulation of the blood is performed. But now if this Circulation be hindered in the extreme parts by the blood being boiled by the preternatural febrile heat, and made fibrous and tough like to dregs of Oil, how should it be but, as

standing waters corrupt, that so the whole substance of the Blood in humane Bodies should be corrupted? When even in fenny places, ponds, &c. we observe sometimes green, sometimes black, sometimes red water is either gathered or corrupted: but most frequently Marshes, and the woody parts of Houses lying under the Penthouse, or Eaves of the House, or the plastered Walls between grow green; because of the Rain abounding with the volatile Salt of grass and herbs, got out by the heat of the Sun; and the like reason may be given for other corrupt Waters. For they are variously tinged with the volatile Salt of the Earth (which must not be denied it) but then corrupted by the heat of the Sun in Marshy places, and they as it were counterfeit and falsely represent rust of Iron, Bole Armenick, Ochre. May not therefore likewise that most vicious and corrupt blood in the live Body of People, sick of Malignant fevers, appear livid, and having lost its rose colour, of necessity most filthily mar the beauty of the Skin in the outside of the hands and feet? When therefore the blood, or the mass of blood grows tough in the forehead manner, so that the Circulation of the Blood does, I will not say wholly cease, but is in part hindered, two Phenomena appear; either the parts mentioned are seized with an occult Gangrene, and therefore they are scarcely recovered, whose extreme parts are seized first with a manifest and pertinacious Heat, and by and by are very red, black and blew, all which things have their latitude and degrees; and when these things are over, the sick are not so violently burnt as before, or they do not perceive themselves so, but the heat falsely abates, and appears more gentle; the Pulse also is apparently better, but falsely, because the blood is tougher, and slower to motion, and Death is at the door: Or a strange colour, which is momentary, easily vanishing and fading, appears in the extreme parts of them that are sick of a Malignant fever. But I divine, that this portends that corruption of the blood is in making, or will shortly be, which is analogous, or like to the gangrenous labor, but that the Salt, rendered in some measure fixt in the Mass of blood, and especially in the said places most remote from the heart, may be made volatile again by Alexipharmacks; that is, prepared Hartshorn especially, and also shavings of crude Hartshorn, shavings of Greenland Unicorn, volatile Salt of Hartshorn, Salt of Vipers, Urine, Ash, Amber, and the like. Wherefore the famous *Rulandus*, who was ignorant indeed of the Circulation of the blood, yet nevertheless in the Hungarian Plague highly commends Chymical Salts, affirming that they do as much as any other Medicines towards the expulsion of its latent fomes, and saying, How much soever you endeavour to assuage the Symptoms, or to strengthen or refresh the Body, you labour but in vain, the fountain still remaining. Nature therefore being strengthened by the help of these Alexipharmacks and volatile Salts, discharges that partly fixed Salt in the mass of blood, being now made volatile, by the Arteries into the Veins, whereupon there appears not any one remarkable broad spot; but many and innumerable appear fresh, when the circulation of the blood is restored, plentiful sweat all the Body over intervening, concerning which Spots Practitioners doubt, whether they come symptomatically or critically. I indeed sometimes have observed, that by reason of the quantity and quality of the blood and corrupt Serum, which Nature was not able to correct, have appeared unhappily, and portended Death it self: I have also observed them to break out critically, as well as the Small Pox and Measles, which were kindly. But these forementioned Spots in Malignant fevers are the effects of a very bad Cause, as it argues so great a corruption of the blood in the live Body, that the Fermentation causes such a diacrisis or apocrisis in the mass of blood, as that the volatile Salt it self appears,

Simon Pau-
li, Digres. de
Feb. Malign.
Sect. 52, &
58.

appears, which is naturally apt to pass from subject to subject, and is by consequent a poison, which acts in its whole substance, and this is the *venenum miasmaticum*, or morbid excretion of Hippocrates.

XXV. Left any one should accuse us, as if we were ignorant of the *methodus medendi*, because when they that are sick of a Malignant fever with a hot and dry Intemperature, and that notorious enough, to the touch indeed gentle and kindly; we presently fly to Sudorifics, Diureticks, and finally to Salts (and I add, that I willingly allow him this, although it be not universally true, that all these things are hot) as to our last refuge, when the Fever requires cooling things. I will here introduce Hofmannus his reason, namely why Diseases of hot Intemperature are cured with hot Medicines, fetched from his *de Medicam. Officin. lib. 2. cap. 128*. Because it holds good not onely in the Venereal Disease, whose cure he treats of in the forecited place, but in Malignant fevers, and many other Diseases called Occult, and in such as wherein the *vis Sævor* of Hippocrates (which word many understand amiss) is said and believed to be. In that place after Fallopius he inveighs against them who granting Guaiacum to be bitter and biting, and therefore hot and dry, yet would have it most temperate, and as like our Body as any aliment, because they observe, that some grow corpulent upon the use of this Wood. By which contradiction some being constrained, saith Hofmannus, have held that this wood cures the Pox: indeed, whether it depend on hot humours or cold, by propriety of substance, or some occult property, and other Diseases joined with it, by manifest qualities. But indeed they are very much deceived: For if it be thus, when it cures the Pox it self, does it lay aside its manifest qualities? They will not say so, I hope; Therefore these Problems still remain undiscussed, Why Hot fights with Hot, and Dry with Dry? And if it be such in adjunct Diseases, why is it not in the root it self? But is it hot and moist perfectly, and does it nourish more than gelly Broth of a Chicken? Then this is sure, Guaiacum is hot and dry, and how does it drive away a Disease that is hot and dry? It is by dissolving and wasting the hot and dry humours (I add, that they appear such, or are really hot and dry, because of the Salt, wherewith the blood of Persons infected with the Pox, does without all controversie most exuberantly abound, for certainly this Plague of theirs is contagious) which is cooling by accident: So Rheubarb cools by purging such humours: but it does it not indifferently and without the Laws of Method, without which those who have tried it, have been greatly hurt. Yet does it nourish? For they take the Body of it? It nourishes not at all; for since aliment is a passive Word, that is, is a thing which is conquered, who can believe that so hot a Medicine can be conquered and turned into the substance of the thing nourished? Yet People grow fat upon it. You kill me; for I said but now it was done by accident, the hot humours being dissolved, and the obstructions of the Bowels being opened, which hindered the generation of Blood. But how bad a Logician are you, in that you distinguish not what is of it self, and what by accident? &c. But this is the summ of the matter, that the Venereal Disease, a hot and dry one, is cured with a hot and dry Medicine by accident; and that indeed by a simple Decoction of Guaiacum. Which we must affirm, is done likewise in a Malignant and Spotted fever, while we use Sudorifics, Diureticks, and Salts in particular, namely, that sharp and hot things are good for them by accident. Why? Because, while in it, no crisis, or but an imperfect one intervening, the Salt in the mass of blood being now made fixt, in the hands or feet, or rather in the Anastomoses of the Veins and Arteries of the said parts, far distant from the Heart, hinders the free circulation, these Salts render it volatile, which being either attenuated or made volatile, and discharged by the benefit of Circulation by sweat, or being more fixt, and as it were in fusion, by the Urinary passages, it does again freely doe its duty, which being procured, the blood is truly cleansed, and as it were ventilated, not onely

in the said Fever, but in other malignant and contagious Diseases, hereupon Health is procured, and the Malignity dispatched: But when in this acute Disease, and in a Malignant fever, Nature receives no assistance, then at length whatever, upon the ceasing of the Fever, or fermentation in the mass of blood, is corrupt and remains, breeds divers imposthumes and swellings in divers parts.

XXVI. And as there is extreme danger in purging in Malignant fevers, so it is well known that those Medicines which are commended against Fevers, and those commended against poisons are diametrically opposite one to another, and why? Because some Antifebrile Medicines have been found out, not by Indications, but by Empiricism: And since the manner of the corruption of our blood in Fevers, and especially in Malignant and Spotted ones, varies, and as it were eludes the industry of Physicians, hence it usually falls out, that both Agues, and especially Malignant and Spotted fevers, when we come to them we call Antifebrile and Specifick Medicines, are so hard to cure, that they are cured rather by chance than reason. And the Cause, besides that I brought from the corruption of the blood, is this, for that there is no Fever without fermentation or ebullition. Therefore if, for example's sake, Nutmeg, Alume, Powder of Tormentill, Antifebrilis Grollij prepared of long Oyster shells with Wine Vinegar, Pearl, Coral, Bezoar stone, Pretious Stones, and the like, be given to People in Fevers, it sometimes happens, that the Fever ceases, and Why? Because that Ebullition is stopt by them, just as we find that the heat of the Stomach is stopt by the alone use of simple Chalk powdered. But if you weigh these simples in the Balance of Reason, you will find it very likely that they act what they do act by drying, and by their earthy parts: for they are in an error, who think that these and the like things are given, onely to give a sweat, or to strengthen the heart; in which error many live, whom Platerus confutes, *Quest. Therapeut. 91*. Since therefore the ebullition caused by the febrile ferment is observed to be far more treacherous and occult in Malignant Fevers than in a Tertian, hence also the recounted simples are given with far greater success in an Ague, to fix its ferment, and stop the ebullition, than in Malignant fevers: for these proceed more occultly, yet more speedily, to their state: Hence therefore the febrile ferment is hurried more quickly in them than in a Tertian (which gives us some truce) from the Bowels into the Veins, or, if the contagion be communicated to us from any where else, from the capillary and cutaneous Veins and Arteries into the greater: And by consequent, because the beginning in Malignant fevers is quickly past over, you will doe little or no good by the recounted antifebrile Medicines, which have onely a drying faculty: for things of gross parts act so slowly, that they are not able to resist these Fevers. Besides, these and the like Medicines that are applied, are onely Cordials by accident; although Sennertus assign them a Cordial and Alexipharmack Virtue. But in my judgment these and the like things act or perform nothing else, but onely stop the ebullition of the Blood that is raised, if they are able: Which ceasing, the circulation of the blood performs its office aright in the Heart, and in this Case the Heart stands in need of no other Cordials, being sufficient of it self to breed Spirits: But if the case be otherwise, and if Malignity be joined with it, a cardiack Syncope usually supervenes. But we must speak of the other sort of Antifebrile Medicines, which are contrary to the former exceeding earthy and dry ones, and are more in use among the vulgar than Dogmatical Physicians, which are these, all the sorts of Pepper, Ginger, adust Wine, Worm-wood Wine, and the like, with which Agues are more successfully cured empirically.

pirically, than Continual fevers, and Why? Because accidentally by the use of these Medicines Vomir is caused, the sink or filth of the Stomach being stirred in the Fit, and so the febrile ferment is discharged together with it, or by reason of more robust Constitutions, the same ferment is carried by these hot and Diuretick Medicines to the Urinary passages, or is removed before it can infect the whole mass of blood; which on the contrary in Continual fevers, where no truce intervenes, is most easily corrupted. But if the febrile ferment be carried to the Urinary passages, and a troubled, ill coloured and stinking Urine be made, it portends usually an abatement of the Ague. Since therefore the case stands thus, who hence forward, where there is no room for Vomits, would not rather chuse certain Diureticks and Sudorificks in Malignant fevers, than run the hazard of a thousand uncertain things, termed Antifebriles, of a dubious or no event at all? Wherefore the never enough to be commended skill of the most famous *Rulandus* merits more and more confirmation, because that in these, and especially in Salts, he seems to place all the remedy he has against Malignant fevers: So *Lapis*, or *Sal Prunelle*, besides, that it stops the fermentation, is a great Diuretick: *Balsamus Sulphuris*, which also stops fermentation is a great Sudorifick: and both of them are most celebrated remedies against the Plague and Malignant fevers. Here also I have a mind to lay down in what manner Spots break out in our Skin, either by the motion of Nature alone, or of Nature helped by Alexipharmacks and Sudorificks, how our Skin comes to be beset with them, and again clear of them: Nature either provoked, or helped by Alexipharmacks, endeavours to expell the blood that is hurtfull to her, and more or less corrupted in its whole substance; which while she is in doing, it is very probable to me, that the very same thing happens to the mass of Blood, especially at the *Anastomoses* of the Veins and Arteries of the hands and feet, which befalls a frozen River, when the frost is broke: For as then the Ice is melted with the kindly and gentle heat of the Sun, so Nature being about to conquer the Disease by the benefit of the animal fire, or innate heat, cooling especially, after the state of the Disease, and burning no more so preternaturally as before, melts the blood thickned and made tough by the febrile heat in the Veins, and as it were congealing because of abundance of Salt, in the extremities of the hands and feet; and as a torrent or river carries fragments of Ice rapidly down the stream, so the blood in the Veins throws off small portions of the preternaturally fixed Salt, which are the Spots, or make them. Wherefore no wonder if Nature upon the use of Alexipharmacks or Sudorificks, made of the mineral, vegetable, and especially of the Animal kind, abounding more or less with volatile Salts, do sooner or later, gradually, or at once, according to the different temper of the Subjects, throw off Spots to the Skin, varying in colour, magnitude and number, which indeed *Rulandus* observed were fixt to the extremities of the Capillary Veins: But they are nothing else but the Salt of the Serum, and mass of blood, made volatile, which sweating through the Pores of the Skin is the proximate and onely Cause of all Spots in Malignant fevers, be they small and lenticular, or great and as broad as ones hand, while, to wit, it buds out in the Skin, and is then fixt in it, till upon amendment it gradually vanish by insensible transpiration, or, even while the Disease or Fever lasts, is resolved into Atomes so small that they cannot be seen, which we call the *μικροματα*, (or infectious particles) and are the proximate cause of the Contagion.

XXVII. When Epidemick Malignant fevers are abroad, or when they are not abroad, if the blood

that is let, when it is cold, be like to good blood in colour, and be as it were very rutilant, coming very near the colour of that Indian Throatwort, called the Cardinal flower, yea in a manner exceeding it; and having very little Serum in it, I have often observed it portend Death to several persons, when the by-standers and unskillfull were glad of this rose and scarlet colour, and congratulated the sick for it. But I have been long ago instructed, as ever distrusting such a suspicious goodness of the blood, to give my Patients in such cases Alteratives with Alexipharmacks, and especially this decoction of shavings of Hartshorn of my own description; Take of shaving of Hartshorn half an ounce, Root of Fenil, *Contrayerua*, *Scorzonera*, Carline-Thistle each 2 drachms, seeds of Columbine, Fenil, each 1 drachm, sliced *Jujubes* 2 ounces, boil them in a sufficient quantity of a decoction of Barley: Towards the end add of Conserve of red Roses 2 ounces, *Idem*. Borage, Buglofs, each 1 ounce.

XXVIII. *Antimonium diaphoreticum* is of marvellous efficacy, given from half a drachm to a whole one in Malignant fevers, Small Pox, Measles, yea and the Plague it self: But whence comes its diaphoretick virtue considering its attritive faculty? *Simon Pauli Quadrip. Botan. p. m. 225.* affirms it is used to stop the ebullition of the blood, not to raise a sweat; for as it is far better to spit on a spark, that it may not burn, and consume a whole House with the flame which it would rise to, so it is most advisable, by cold and dry things, (such as *Antimonium diaphoreticum* is, and also Root of Tormentil, Bistort, which are attritive and Diaphoretick, Bole Armenick, *Terra Sigillata*, burnt Hartshorn, *Calx Antimonii*; &c.) to stop the burning of the blood, or the fermentation following it, which if it exceed measure, so as the circulation of the blood being altogether disturbed, the blood be unspeakably corrupt, it can neither return again to its natural habit, and the contagion which follows that corruption, that takes so many off, is called the Plague, whose fomes, seminary, or contagion you will never cast out of the Body, except by Alexitericks or Sudorificks. But this reason does not yet satisfy, for if it held good, the cure would not be safe, while the cause of the burning or ebullition, would not by this means be taken away, and Opiates were better able to doe this work. Nay, Whence proceeds the usual eruption of Sweat after the use of the enumerated Medicines, which are cold and dry Diaphoreticks? Wherefore I judge that *Antimonium Diaphoreticum*, as also the other Medicines, are not indeed among the number of those Sudorificks, that have the faculty of attenuating and dissolving gross humours, but that they are such as, imitating Nature, do by their fixing and precipitating virtue, which depends on a peculiar texture of the parts, fix and precipitate the morbidick ferments, or the volatile Sulphureous Salts, and also strengthen the Tone, which being done, the tumultuating faculty of the *Archæus* is quieted, and throws off what is troublesome, by Sweat or Urine, from the *Lympha* p. 303. or mass of blood.

XXIX. We must take notice that *Oxyrrhodina* are not so convenient in Malignant as in Simple Putrid fevers, because the dispersing of poisonous vapours must be procured by all means, and not hindered, therefore gentle repellents must be made use of, or if the violence of the Symptoms be urgent, we may proceed to strong ones, so they be not kept long on.

XXX. In Malignant fevers we must have a care of Epithemes, for they may by no means be used in poisonous Diseases, and therefore we must avoid them as a pernicious Poison. ¶ In Malignant fevers we must utterly avoid cold Epithemes, which are proper for the Heart; but they must rather be applied warm: for otherwise there is fear, lest, when the Malignity is translated and struck back from

Idem.

Frid. Hofmannus, Clavis Schrederiana, p. 303.

Riverius.

Mercatus.

from the Circumference to the Center, more harm than good result from it: Therefore cordial Baggs are besprinkled with no liquours, but what are spirituous, for fear of repulsion.

Wedelius.

XXXI. If the extreme parts happen to be cold, there is great suspicion of Malignity and Languidness of faculty; for that Coldness testifies there are both these Causes, to wit, a Malignant Putrescence of the Humours in the Bowels, or Ulcers, or great Inflammations, or violent pains in the Intestines; all these things force the heat to run inwards, and to desert the out parts. In this case there should be the greatest care imaginable to recall the heat, and by all means to keep these parts in an equal temper with the other parts: For although this coldness of the Feet be no cause of the Disease, but a Symptom, yet it is removed by revocation of the Heat, that is, of the Blood and Spirits. And nothing is more beneficial than to call them back, because of the harm of their running to the internals, which increases the inflammation and other affections of the Inwards, and the heat it self by its being pent in is the cause of its own extinction. Therefore we may not apply cold things to the Feet, lest the burning heat be repelled inwards (for in colliquating Fevers applications are best made to the Body between the Armholes and the Groin) it is well if you can keep them from being cold.

Vallesius.

XXXII. When in Continual, yea in Malignant fevers, where a Delirium is imminent, or the Patient cannot sleep, we apply Plasters to the Soles of the Feet, which are held to be applied for revulsion sake, truly here is a notorious fallacy of the Cause committed. For they are all hot things, which abound with their volatile Salts, and are of very thin parts, Pigeons cut open alive, pickled Herrings split, Horseradish, Leven with Salt, Mustard, &c. Hence, while in the said extreme parts of the Body both the venous and arterious Blood, being burnt up with the febrile heat, is made heavy and dull, cannot freely circulate, these very things applied to the Soles of the Feet do attenuate, melt and put in fusion that fixt Blood and Serum, by means of those subtle and volatile Salts wherewith they abound, and so by accident, while the free circulation of the blood is procured in the Feet, and it cannot reflaginate into the Head, natural sleep creeps on.

Simon Pauli.

XXXIII. The use of Wine in this Fever sometimes is very beneficial, for it is a great cordial, and very opposite to Malignity: Yet it often does harm by increasing the feverish heat: Wherefore the constitution of the Patient, and Nature of the Disease, must be well considered. If the Fever be small, the poisonous quality intense, and the Patient Phlegmatick, mixt with water, it may be given safely and successfully: In a violent Fever, and a chole- rick Body Wine is destrutive. I have by infinite experiences observed these things, especially in the purple Fever, which was at Mompelien, anno 1623. distinguishable from the true Plague onely by the Bubo. For to those Patients, whose Pulse was not very frequent, but like the Pulse of a healthy man, their Tongue moist, and no thirst, I gave Wine with good success, and the relief thence emerging indicated the continuation of it, both because the Fever was not heightened by the use of it, and there was no thirst nor driness of Tongue raised: In what Patients the contraries were, I forbade them Wine altogether. Yet we must observe, never to give Wine in the first days, lest the crude matter be too much moved, but onely about the State, when the signs of Malignity begin more fully to exert themselves.

Riverius.

XXXIV. In the year 1623. after the Siege of Mompelien, a very Malignant fever raged for several months, of which half that were sick died: and they peculiarly who had the Parotides (or swellings of the Ker-

nels behind the Ears, which came usually about the ninth or tenth day of the sickness) did all die: And when I had seen several such, but could save none of them by any Alexipharmacks, I began to think that the Parotides must needs be mortal, because that part was not able to receive the whole moribund matter, which remaining within, destroys, and that Nature's work must needs be assisted. And although the Patients had a small frequent, and almost formicating pulse, so that they seemed to be in the very agony of Death, which usually shortly followed: Yet revolving in my mind Celsus his opinion, That many things are very well done in an extreme danger, which should otherwise be omitted, And that it is better to try a doubtful Remedy in one or two, than to leave so many sick to perish, I prescribed Bleeding at several times, because of weakness, twice or thrice on the same day, and a Purge the day following. By which means all who had those Remedies administered them, did happily escape, and not one died after that. ¶ I will not think much to tell what I am wont to doe, when Patients in Malignant fevers have the Parotides arise, because I think many were so saved, who had otherwise perished. As soon as they begin to rise, I anoint the part with some suppling Oil, as that of Chamæmil, and if they are slow in coming out, I set a Cupping-glass to the very place, lest the abscess be too little, to doe any good: But when it is apparent enough, if it increaseth very much in a short time, I let blood again, lest it grow greater than can be indured: And then by and by I open the tumour, while it is yet hard, never tarrying for suppuration, with a red hot knife; on one side, if the Swelling be but on one side; on both sides, if the Swelling be on both, and I apply a suppurating Cataplasma. For the most part the business succeeds well, for the Swelling quickly putrefies when the Eschar is made, and then Matter begins to run; and the head and other parts are purged by that Orifice. Nor let this seem cruel to any man; for the glandulous part is but a base one, and therefore we may cut and burn it, and fear to doe neither.

Riverius.

Vallesius.

XXXV. One was violently ill of a Purple fever, in the year 1622. and was troubled with a vomiting of all potent matter, as soon as it was drunk, retaining onely Broth: The Fever had ragged with cruel burning and thirst for four days, which could be quenched by no drink: The inwards were so parched and burnt, that the Tongue was very black and dry. This so grievous a symptom was removed by this slight Medicine: Take of Salt of Wormwood i scruple, fresh Juice of a Lemon i spoonfull; they were mixt in a spoon, and given presently. The vomiting was stopt immediately, and from that time he drank as much as he would, and never thenceforth cast it up again.

Riverius.

XXXVI. Since the Hands and Feet, according to the motion of Nature or Circulation, abound more with the excrement of the third Concoction, than any other parts of the Limbs, who then is there that would not then think it credible, that in Fevers, and especially in malignant ones, the humours are most corrupted about these parts? And that it is not convenient for Physicians or bystanders, to handle the hands of Persons in Malignant fevers oftner than needs they must, unless they are willing to be infected with the Contagion? Take this experiment of the matter from me; after I had several times felt the Pulse of People in Malignant fevers, my hands began to itch, as if they had been stung with Nettles, which, when I came home, I washed, and lo, all on a sudden, my fingers were strangely and incredibly swelled, the swelling being quite gone within a quarter of an hour. ¶ I here experienced

Simon Pauli.

the same, Anno 1669. when the small Pox were Epidemical: As my Wife (yet free from them) was sitting with a Noble Matron, she took me aside privately into another room to tell me something concerning the state of the Patient, but while she was talking to me, I felt as it were Needles darted from her mouth into my face, and I ordered her to cleanse and wash her face, and to arm herself with Cordials, for prevention sake, so by God's assistance she enjoyed the company of her intimate infected friend without any harm.

*Febris Peripneumonica, or, A Fever
with an Inflammation of the Lungs.*

Its Description and Cure.

TOWARDS the latter end of Winter, and beginning of Spring, there arises every Year a Fever, with a great many Peripneumonick Symptoms. It seizes full Bodied and gross men above all others, or those that are arrived at, or (which happens oftner) are past man-age, and such as are more than ordinary addicted to strong Liquours, especially Brandy. For when the Blood in such men is loaden with pituitous humours, gathered in Winter time, and the same is upon the approach of Spring put into new motion, a Cough upon that occasion does now and then enter, by means whereof the said humours fall violently upon the Lungs: at which time if perchance the sick party, living in no order, drink still freely of such Spirituous Liquours, the matter now growing thick, which caused the Cough, both the passages of the Lungs are stoppt, and the Fever seizes the whole mass of Blood. At the first approach of the Fever the Patient is sometimes hot, and sometimes cold: He is vertiginous, he complains of a racking pain in his Head as often as the Cough troubles him. He vomits all he drinks, sometimes without a Cough, and sometimes with it. He makes a troubled Urine, and very red. His Blood, when let, resembles the Blood of Pleuritic Persons. He is often out of breath, and draws it thick and short. If he be bid to cough, his Head akes, as if it were ready to split, (as the Patients usually express it) and he has a great pain in his Breast, or the straitness of his Lungs may be heard by them that are by whenever he coughs, the Lungs not sufficiently dilating themselves, and so the vital passages being stoppt, as it seems by their swelling; whereby the circulation being intercepted, there are, in full bodied People especially, no signs of a Fever; though this also may happen, by reason of the plenty of pituitous matter, wherewith their Blood being oppressed cannot arise to a full ebullition.

In the cure of this Fever I think this is my business, to make revulsion of that Blood by Phlebotomy, which is the cause of the stoppage and heat of the Lungs; to take off the obstruction, and give air to the Lungs by pectoral Remedies; and to restrain the heat of the whole body by means of a cooling Diet. But since on the one hand the load of pituitous matter contained in the veins, which continually affords fuel to the Inflammation of the Lungs, seems to indicate repeated Blood-letting; and since on the other

hand the diligentest observation that I could make, hath informed me, that Phlebotomy often repeated in Fevers proves very bad for them that are of a gross habit of Body, and this affrighted me as much from the repetition of it; I used frequent purging instead of bloodletting, which is well enough substituted; in them that have an abhorrence of large and repeated bleeding. Therefore I proceeded thus, I ordered him to be bled in the Arm as he lay in Bed, and I would not suffer him to rise for two or three hours; seeing all taking away of blood, which in some measure spoils and destroys the whole compages of the Body, may by this means more easily be endured; so that a Patient can bear it better, if ten ounces be taken from him in Bed, than if he lost but six or seven, after he is risen. The next day in the morning I give him the following Potion; Take of *Cassia* extracted 1 ounce, *Liquorish* 2 drachms, fat figs No. 3. Leaves of *Senna* 2 drachms and an half, trochiscated *Agarick* 1 drachm. Boil them in a sufficient quantity of water. In 4 ounces of the Colature dissolve of *Manna* 1 ounce, Syrup of *Roses* solutive half an ounce. The day after I use to let Blood a second time, and one day intermitted, I order the Cathartick Potion, now prescribed, to be given again, and so to be repeated by turns, till the Patient perfectly recover. Those days he does not purge, I advise him to use the pectoral Decoction, Oil of sweet Almonds, and such things. In the mean time I keep my Patient from Fleth, and Broth thereof, and especially from all Spirituous Liquours whatever; instead whereof I allow him *Pisane* of Barley and *Liquorish* (and small Beer also, if he desire it,) for his ordinary drink.

And this indeed was the way to conquer this bastard *Pleurisie*, which arose from a pituitous matter gathered in the Blood through Analogy with Winter, and discharged into the Lungs; wherein not onely repeated Bleeding but Purging also was indicated; otherwise than in a true *Peripneumony*, which I judge is clearly of the same nature with the *Pleurisie*, and differs from it onely in this, that a *Peripneumony* affects the Lungs more generally. Moreover we cure both Diseases by a Method perfectly alike, that is, by Bleeding above all other things, and by cooling Medicines.

This bastard *Peripneumony*, though it be a little like a dry *Asthma*, both as to difficulty of breathing, and other Symptoms also, yet it may well enough be known from an *Asthma*, because in the *Peripneumony* manifest signs of a Fever and Inflammation shew themselves, which never appear in an *Asthma*; although they be less by much, and more obscure in this sort than in a true *Peripneumony*. Sydenham.

Febris Pestilens, Pestis; or, A Pestilential Fever, the Plague.

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I. AS for what concerns the Essence of the Disease, I do not undertake exactly to define it: But because the rise of all similar Diseases is usually derived from some fault of either the first or second qualities (which is as far as we can go in this obscurity of things) I almost think that the Plague is a peculiar kind of Fever, which has its original from the Inflammation of the more spirituous particles of the Blood, because, in their tenuity, they seem most proportionate and adequate to its most subtle nature. Which, if it be in the highest subtilty whereof it is capable (as in the beginning and state of the Epidemick constitution) it suddenly, and before one is aware, dissipates the innate heat, and destroys the Patient. The dead Bodies in the mean time, of those that die so suddenly of the violence of this disease, are all over beset with purple spots, because the fibres of the Blood are broken by the violence of the intestine conflict, and its frame wholly dissolved. And this Tragedy is acted by the extreme subtilty of this flame, even without any febrile ebullition of the blood, or any precedent sense of other sickness. Otherwise, than for the most part it happens, where the morbidick cause is not so subtle, and does as it were strike at life with a blunter weapon. But such sudden death seldom occurs; For, as in other Fevers, cold and shivering for the most part invades Men, and heat follows, and continues till the particles of the inflamed blood be discharged to the Emundories, and be there turned into Pus, like common Inflammations. Now, if the Inflammation be yet more remiss, it usually produces Fevers, which they call Pestilential, as it often happens in the end of a Pestilential constitution, till that sort of Fevers wholly disappear. But not onely the presence of a Fever, but the colour of the blood that is let, which is like pleuritick and rheumatick persons, does favour this opinion; and the adust appearance of Carbuncles, not unlike the impression of an actual Pyrotick, as also the Bubbles themselves, which as constantly follow the Inflammation, as any sort of Tumours use to follow it, and as most Inflammations terminate in an Abscess. Moreover, the season of the year, in which an epidemick Plague for the most part arises, seems to contribute its share toward this thing, for at the same time Pleurifies, Quinsseys, and other affections of an inflamed blood are usually abroad.

But here some may inquire, If the Plague consist in a certain Inflammation, How comes it to pass, that Medicines of a hotter rank, such as almost all Alexipharmacks are, are used with so great success, both in the cure and prevention of it? To this I answer, that they onely give relief by accident, namely, by benefit of the Sweat, which they raise, whereby the inflamed particles of the Blood are dispersed and cast out. But if it happen, that when they are given, they be not able to move Sweat (as it often happens) presently the burning of the blood, more enraged by the additional heat, openly proclaims their mischief. I know also, that hot Antidotes are every where cried up for Preservatives, but with what advantage, remains yet to be proved. Yea Wine drank liberally, and other stronger preservatives taken at set hours every day, have cast several into this disease, who otherwise, in all likelihood, had remained safe and untouched.

II. All the Symptoms observable in the Plague do either confirm or prove, that a lixivial Salt, and that a sharp and volatile one does offend. Now this must be shewn from Medicines, that are used with good success, both for its prevention and cure. And whoever would gather any thing for certain from the Medicines that are used, it is necessary for him onely to consider Simples, or those that are least compounded. About nine years ago, when I every day visited many that were sick of the Plague, I took nothing but a spoonfull of Vinegar, soaked up in the crumb of bread, for prevention sake, and in the morning

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morning before I visited my Patients. I used this sort of remedy for eight whole months, and I never after perceived any harm from the Infection for the whole time. But when this malady was by degrees removed, and I had left off taking of Vinegar any longer, I found afterwards a little Head-ach come upon me, whenever I entered an infected house, although I knew it not, and feared nothing. I know indeed that very few can use Vinegar for some weeks, as I did, while some, by reason of their peculiar melancholick constitution cannot persist in the use of it for many days. Others use to commend a draught of Rhenish wine, or of old stale Beer in the morning. I know there are not wanting some who commend simple Spirit of Wine, or Treacle-water, but I know it has done many harm, which cannot be said of Acids, at least in reference to the Plague: *Elizir proprietatis*, Spirit of Salt, Sulphur, or Vitriol, taken in a little Beer, or Wine, is commended. Acid fruits are also commended, as Citrons, Oranges, Pomegranates, Corinths, &c. the smell also of Vinegar in a Sponge is refreshing, whether it be simple Vinegar, or impregnated with some Spice, or Aromatick Plant. So that if a Man compare the most effectual things for prevention of the Plague, he will find, that either all of them are Acids, or made up with Acids. Whence I think it is evident, that an Acid is not onely desired against the Poison of the Plague, but that the Poison is especially hit and resisted by it. But for them, to whom mere Acids are troublesome and grievous, they may be mixt with Spirit of Wine. So by means thereof Spirit of Salt is so allayed, that almost all its acidity is taken off, if one of them be often cohobated with the other, and yet it ceases not to doe good in the Plague. It is requisite therefore, that in this case Medicines should be so accommodated to every ones peculiar temperament and constitution, that no harm, but a great deal of good may accrew to them: To this purpose Medicines may be made up in divers ways and forms: To this purpose also hot crude Tartar, and the cream of it, as also *Sal Tartari vitriolatum* may be used any way, in Broth, Wine, Beer, a Julep, &c. In one word, Acids do conduce, above all other things, to the prevention of the Plague, taken in a way most accommodate to everyones particular nature. Since experience teaches, that, these things are very true, my Opinion is by this very thing confirmed, That our Acid is resisted by the Pestilential Poison, to which, since nothing is observed more contrary than lixivial salt, the Poison may deservedly be reckoned to consist in a lixivial Salt: But because it is a swift and very efficacious Poison, therefore I judge, the same consists in a volatile and sharp Salt.

III. Whether the method of curing a Pestilential putrid Fever require both Evacuations before or after the use of an Alexipharmack, and whether Evacuations should be first? Since these two questions have that coherence, that one of them cannot well be parted from the other, let them be decided together. It is evident, that not onely a Plethory, and a Cacochymie, but rather the very greatness of the Disease does indicate and require both Bleeding and Purging: But every Disease is said to be great or small on a threefold account, either because of the excellence of the part afflicted, or of the violence of the Disease, which the violence of the Symptoms doth shew, or of its malignity or virulence. But since a Pestilential fever first annoys the heart, it partaking of a Poisonous Contagion, and rages with horrible Symptoms, a *delirium*, *Bubo* and Carbuncle, it ought not onely to be called great, but the greatest of great Diseases, and seems to require both Evacuations. But this precept of sacred *Hippocrates* and *Galen* holds not perpetually in the cure of all great Sickneses: For if one be intoxicated with a poisonous Animal, or outwardly

with a poisoned weapon, then *Galen* and *Democritus* judge there is a two-fold indication, either by evacuating the poison, or by altering; But they determine, that the evacuation must not be by Purging or Bleeding, but by help of such Medicines as by their heating faculty may draw and get out the poison, as Cupping-glasses, Cauterics, &c. And the other indication for the Method of curing Poisons, consists in Alteration, by Medicines, which either in quality, or in their whole substance, are opposite to the poison. It is my advice, that we especially observe these two ways of curing virulent Diseases and poisons, while we cure Pestilential fevers: Because, seeing all Poison, of its own genuine property, does first of all affect the heart, the House and Fountain of life, and then is on a sudden dispersed through all the Bowels and habit of the Body; What is more necessary than that you should first of all give assistance and relief to the heart by those Alexipharmacks, which either in their quality or whole substance, resist the destructive poison of the Plague? But if a *Bubo* break out in the Groin, an *Impothume* in the Arm-pits, or a *Parotis* behind the Ears, about the Emundories of the Brain, Heart or Liver, or in the mean time a Carbuncle bud out in the Arms or Legs, then as in poisonous wounds, you must hastily apply Medicines to the place affected, which may draw out the venome, and scarifie the Abscess before maturation, or open or burn it with an actual or potential Caustic, if the Patient fear fire, which by their heating and burning virtue, not onely attract noxious humours, but also often open gatherings made by them. But whether beside these things the noxious humours of this Disease be to be evacuated by Bleeding or Purging, is not yet determined. But seeing the cause of the Disease is mixt with the Blood in the Veins, What hinders, but that after ten or twelve hours, from the taking of the Alexipharmack, and when the Sweat is ended, and the Spirits refreshed, we may breathe a Vein in the same side, in some proper place, under the abscess, or Carbuncle, age and strength concurring, seeing Phlebotomy not onely draws out the infected humours, but also opens obstructions, and abates the heat of the Fever? Nor need you fear the revulsion of the humours inwards, when the Abscesses are covered with strong attractive Medicines, which resist revulsion. Wherefore *Galen* and *Paul* advise, to begin the cure of a Carbuncle with Bleeding till one swoon, yet exclusively, which I do not disapprove. But whether strong Purges in the cure of this Fever be so convenient, I cannot easily say; because they do but the more disturb the noxious humours, and disperse them through the whole Body, and draw them again inwards, and waste the strength; and they participate also of a poisonous quality, and use very often to cause a Bloody flux and Loosness, which is usually otherwise peculiar to this Fever, and for the most part is a mortal symptome, where-with all that were taken in the long Plague of Rome, who could not be helped by Bole Armenick, died, as *Galen* 3. *Epidem* relates; But if the obstructed Belly do not void it Excrements, who will dissuade the use of a lenient Clyster? And if the Disease have passed the state, that the reliques of the Disease may be extirpated, a Purgative Medicine of Rheubarb, Agarick, *Cassia*, Tamarinds, *Manna*, can doe no harm; as those strong ones, *Diagridium*, *Coloquintida*, &c. seeing they savour of Poison, can do no good. I have cured several, who were given over for dead, in this Plague, by this method. If before the beginning of the Disease one went little or not at all to stool, then I procured one by a Suppository, or a gentle Clyster; afterwards I gave a Sudorifick Alexipharmack, which, according to the age and strength might provoke Sweat for two or three hours or more: I applied Epithems to the Heart; And if an Abscess or Carbuncle arose, I presently applied Pla-
sters

fers, to draw out the Poison; Then about six or seven hours after Sweating, but the strength first refreshed by some Broth, I opened some convenient Vein: But every day after the taking of the Alexipharmack, both morning and evening I gave some alterative Potage, which might, both in quality and whole substance, resist the poison of the Disease, and also strengthen the Heart, such as are made with juice of Lemons, Citrons, Oranges, Sorel and Wood-Sorel, with a little Vinegar and Sugar. And in the declension of the disease, if the appetite were languid, I first Purged the Blood from the reliques of the Contagion by Medicine, that the Body might safely be nourished; Last of all I ordered the Chirurgions not to hasten the healing of the Sore or Carbuncle, and I charged the Cooks to give the Patient his proper Meat and Drink at the time prescribed. By which way of cure a vast number of sick people recovered. ¶ Hence it is evident, they are under a mistake, who being content with Alexitericks onely, do give them to every Age, without method, relying onely on Experience; And that all method should not be rejected, seeing a Pestilential fever has not onely one Indication of Cure, but two or three: For the Fever requires cooling; the Putrefaction requires alteration, evacuation, &c.

IV. Men are of quite different opinions, whether Bleeding be convenient, in the cure of Pestilential fevers, some approving, others disapproving the opening of a Vein in the Plague. But neither opinion taken simply is reckoned safe by *Peter Salius*: for he finds in either what he may deservedly disapprove. They that judge we must proceed onely by Alexipharmacks in the cure of a Pestilential fever, wholly rejecting Blood-letting; they, he says, have regard onely to the pernicious quality; but they slight the putrefaction (or fermentation rather) of which nevertheless, in such cases, most reckoning should be made, for except you remove it, the Fever, which is putrid, cannot be removed; and you will scarce be able to cure this, unless you abate the quantity, that causes and upholds obstructions, and which is grievous to Nature. Wherefore we must indeed give Antidotes, to infringe the base infection; yet we must likewise doe our endeavour to take away the Putrefaction, whose cause we shall then try to remove, when we shall attempt eventilation by exonerating Nature, and diminishing the matter. But their opinion, says he, who have admitted and commended Bleeding in a Pestilential fever, I am afraid has been broached to the destruction of Mankind: For he reckons this to be an Axiome of eternal verity, *That a Vein should never be breathed upon the account of a Pestilential Affection; Or, Blood-letting must by no means be admitted in a Pestilential fever.* But seeing, sometimes Nature must be eased of her Burthen, and the body must have vent, he shews another way besides cutting a Vein, whereby we may satisfy this Indication without loss of strength, that is, by application of Leeches to the Hemorrhoid Veins, or by scarifying of the lower parts. I indeed think, that opening a Vein in a genuine and simple Plague, is for the most part hurtfull; because, by frequent experience, it is oftner found to doe hurt than good in Pestilential fevers; and I judge that those remedies that are instead of Venesection, may more properly be used in the simple Plague; But I do not wholly disallow Venesection on it self in the Plague joined with a Fever, or in Pestilential fevers themselves. For when the body is plethorick, and the strength is oppressed, or the loss thereof is imminent from the plenty of blood, or when a Fever is joined with the Plague, or a Pestilential fever it self afflicts a Man, sometimes a Vein must be opened, especially in those that are used to it, when nothing in its stead seems to suffice, but it must be in the beginning, by and by after Alexipharmacks are given, and when their

operation is onely over. And here I fully approve of *J. Palmarius* his advice, cap. 23. Where he thus determines about bleeding, In a Plague which is complicated with a putrid constitution, where there are the Head-ach, want of Sleep, Tossing, Thirst, a dry Tongue, an ill Pulse, great Heat about the Heart, and other Symptoms proceeding from the heat and putrefaction of the humours. If the Veins be turgid with plenty of humours, blood ought to be let, more or less, as the fullness of the Vessels, Age, the Season of the year, the habit of the Body, and the violence of the Symptoms will bear; So the strength be good, and the Physician be called in the beginning of the Disease, and it be taken away in much lesser quantity than in other Fevers. And according to the same *Palmarius*, the blood must be taken from the Foot or Leg, if a Bubo be protuberant in the groin, or in any part below the Loins; But in the Arm, if in the Jaws, or Arm-pits, or in any other part above the Kidneys, or even in the Loins themselves, and that always on the same side. As it is well advised by the same party, that we must abstain from blood-letting, whenever a Pestilential fever affrights us with lowness of strength or fainting: Besides, whatever simple and legitimate Plagues do shew no signs of putrefaction in the Urine, or in other excrements (as those which have no Fever joined with them) these, *Palmarius* being judge, abhor blood-letting, how cruel soever the Symptoms be. In the Plague therefore, as the Plague, bleeding does no good: But as there is imminent danger from the quantity of blood, while strength is good, and other circumstances do not hinder, it must be diminished.

V. Whether in the time of a Pestilential fever, bleeding be proper for preservation? Almost all Writers shew, that a Plethory *quoad vires* (because this is it, from whence there is imminent danger of corruption) must be taken away by bleeding. But this opinion is not convenient always, and in every place. But it may be of use with this distinction. In a wholesome Air, in Spring and Autumn it may be admitted; but not in the midst of Summer or Winter, nor in very hot or cold Countreys, or Constitutions: On this hand the body is too much cooled, on the other hand too much spent, and it is not then safe to evacuate sound bodies. If the state of the Air be pestilential, blood-letting must never be practised, because of this plenitude; for it very much exhausts the Spirits, and stirs the humours; and the inspired Air more easily impresses its pestilential action; and the Disease, if it come, is conquered with more difficulty, because the strength is spent by blood-letting. For as when Men have drunk poison after bleeding, it more easily penetrates, and is more difficultly overcome; In like manner, they that are well, who admit of bleeding in a pestilential Air, more easily receive the bad quality of the Air, are worse, and escape with more difficulty. Besides, such a Plethory may easily be exhausted by a more spare and thin diet, by loosening things, and cleansers of the blood. But they that have taught, that when blood abounds, a Vein must be breathed, were either mistaken, if they spake of this plenitude, or they were superfluous, if their discourse was of plenty of good blood: Both because a pestilential fever does not impend from this, and because it is good to abound in blood, because Life depends especially on it. Which if it so redound, as to distend the Vessels, although bleeding be proper, yet it is not our case, because hereon, not a pestilential fever, but bursting of the Vessels, extinction of the native heat, &c. does usually follow. And although a Plethory *quoad vires* in a pestilential Air, be not to be taken away by bleeding, yet considering the causes hereof, we sometimes admit some diminutions of it, as if it be superfluous on account of the Diet, or of some evacuation oppressed. For this reason in Wo-

A. Deussingius, l. 5. de Peste cap. 23.

Joh. Langius, lib. 1. Epist. 18.

Pet. Salius
Diverius, c.
20. lib. de
Feb. Pest.

Crato.

Flurnius,
L. de febribus.

P. Barbette,
de Pestis, p.
173.

men I commend bleeding in the lower Veins, which because it spends the strength less than in the upper Veins, it may, without any impending danger, both relieve nature, and provoke the *Menses*. I say the same of them that have the hæmorrhoids stop'd, or any accustomed hæmorrhage suppress'd. To which evacuations nevertheless, I should never descend, without a new and urgent indication. ¶ Although letting of blood do not draw out the Infection, yet, I confess, in curing and preventing a putrid pestilential fever, it does a great deal of good, if it be seasonably us'd; but in a contagious one, which is caused by inspiration of the seminary, seeing all hopes of safety consists in preserving the strength, we must consider again and again, lest any thing be done rashly, and without reason.

VI. *Oribasius* advises, not to bleed in the cure, but to scarify the Legs; which, according to *Alpinus*, is customary with the *Egyptians*, where the Plague is commonly endemical. This may well be done, when we would make a general evacuation, for the blood will run out plentifully (amongst them, the fleshy part of the three Muscles of the calf of the Leg is cut with a Razour, in a straight line; 4 or 5 pretty deep wounds are inflicted, and they have a care that they do not close for a long time, so the filthy corruption is discharged.) And that place is so far from the heart, that it is not so sensible of this injury. This also may very well be done, if a Carbuncle fix near the region of the heart, and if you think blood ought to be let, but if it seize other parts remote from the heart, the next place to the Swelling must be bled. If Carbuncles or Bubbles appear in the Groin, the lower Veins are opened. If one appear in the Neck, a Vein in the Forehead must be cut, or the Veins in the Nose must be opened: Or the Jugulars must be opened, or one under the Tongue, and Cupping-glasses must be set to the Arms, and the Neck deeply scarified. From the foresaid reasons (yet trust experience) I durst almost infer this Maxim, A Malignant Tumour arising of it self, if it precede a pestilential fever, does, in its beginning, and while the strength is good, admit of large blood-letting in the Vein next it, that the poisonous matter may be exhausted, and the fear of a future Fever prevented. But yet, if the Stool or Urine have no sign of putrefaction, a Vein must not be breathed, though the Symptoms be urgent. But if this Impothume follow the pestilential fever, Phlebotomy will do hurt. Therefore, before there is a pestilential fever, we may bleed. Yet seeing the Plague comes from contagion, because of the poisonous putrefaction already conceived, I should think we should abstain from blood-letting.

VII. Bleeding is very prejudicial to them that are sick of the Plague; and it is very dangerous also for them that would be preserv'd from it. The poison often lurks, for some days, weeks, or months, in the body, out of the Vessels, before it shew it self by the use of Medicines that stir the blood. But if by Venæsection you draw it to the heart, it behoves you to inquire, whether or no the diminution of the blood, spirits and strength, through your means, be not the cause why the Heart is suffocated, and is not able to chase away its enemy. Physicians indeed, who deserve credit, and are well versed in their art, do say, that cautious bleeding, and celebrated at the beginning, has ever been the chief of Antipestilential means. But they that in these cold Countries imitated them, soon left it off; yea, our Country Physicians are now wholly silent as to bleeding.

VIII. The Circulation of the blood tells us, that all poisonous and bad humours, which are either thrown off by Nature it self, or come from abroad, should immediately, at the very first moment, be drawn out from the Glandules, and the Skin it self, by means of attractive Medicines, lest that in the

space of a small time all the blood be infected, and the heart it self be oppress'd, and suffer violence. This may sufficiently shew, how dangerous it is to breathe a Vein, and Purge the body in a Pestilential and Venereal Bubo, yea, and in all venomous wounds; on the contrary, how necessary it is to draw out the peccant matter by the help of sudorifick and attractive Medicines; And therefore that the doctrine of the Circulation of the blood is of great use in the Art of Physick.

IX. Purging in a Pestilential fever is suspected, both because of the lowness of strength, and because a Loosness, and that a colliquating one, quickly happens. But we must note that it is not always so. But when it is, whether it be colliquating, or because nature attempts to discharge the peccant matter, Physicians are not of one opinion: For the most indeed think, Purgatives may be given, but such as leave an astriction behind them. Others judge otherwise, and aright, for since in this case it is either the humours themselves, or the solid parts, that are colliquated, the colliquated matter does not require vacuation by Medicine, seeing Nature discharges it of her self; nor is it indicated by what is to be colliquated; since such evacuation should rather be stop'd: nor yet as if I thought it should be stop'd by Astringents, because if it be altogether bad, it would do more harm kept than voided, but I should recommend it to Nature, while the Physician opposes the causes of colliquation. But if the flux be not Colliquative, but Nature only attempts the excretion of the peccant matter by stool, then it will either be Symptomatick, and the matter crude and bad; or critical, and the matter concocted. If Symptomatick, it will either be moderate, or too much, from whence loss of strength may be feared. If moderate, it must neither be promoted nor hindered, for there is no cure of Symptoms, by themselves. If too much, it must be stop'd with such things as respect the peccant matter, and the present Disease. But in Pestilential fevers, wherein the Belly is not loose, some would Purge, others not. Of them that would, some presently in the beginning of the Disease, others not till the matter is concocted. They that do it in the beginning, some do it in the matter turgid, others when it is quiet. Again, some use gentle Purges, others violent. They that purge in the beginning, when the matter is quiet, fear lest it become turgid, and seize some principal part: They confirm it from *Galen*, 5 method. 12. who writes, that they who recovered of the Pestilence, which was abroad in his time, some of them vomited, all of them were loose. They add, that a crisis must not be tarried for, which comes in the state or declension; for, as *Galen*, 2 Aphor. 13. says, Most crises end in a recovery, unless the state of the Air be pestilential. They produce also the experiments of them, who, in long Pestilences have recovered Men innumerable, by giving strong Purges in the Beginning and Encrease. They that think Men ought not to Purge, are perswaded thereto, because immediately at the very beginning, there is a great decay of strength; and because Colliquation is joined with it, or an internal Inflammation, in which a Purge does a great deal of harm. Therefore the most famous Physicians, Greeks and Arabians, do not mention one word of Purging. Others add, that all the motion of the matter is to the skin, and must not be drawn inward. In this difficulty we would first of all observe this, that there is a manifold difference in these Fevers. The first is taken from the form; for one Pestilential Fever is simple, another mixt. The simple one is that which without the Putrefaction of other humours, has its rise from some poisonous putrid matter: The mixt, when other humours also do putrefy. The second from the subject, for the poisonous quality is either in the spirits, whence comes a pestilential *Ephemera*; or in the Humours, and it is humoral;

moral; or in the solid parts, and it is Hætick. The third is from the matter; for the poisonous quality may reside, either in choler, phlegm, melancholy, or blood, and they keep the periods of those humours. The fourth is from the place of the matter, whence some are continual, others intermittent: The matter of the Continual, some is in the Veins, other in some determinate part: For, according to *Galen*, we have Malignant fevers from the Brain being affected; And such also as come from the Membranes containing the Brain; and from the Lungs and Heart. The fifth from the degree of putrefaction and venemous contagion, since in most Fevers there is much putrefaction, and but little poisonous contagion, in some on the contrary: In some both are great, in some, both are little. The sixth is from the Symptoms, for some are quiet, so that they shew not themselves at all; others make the Patients very restless, especially inwardly: Some are colliquating the Belly, others abounding in Urine: Some are with Spots, others without. These things granted, we say, 1. We must not purge in a Pestilential *Ephemeræ*, and Hætick, unless there be a great Cacochymie, with fear, lest the Infection should spread thither. 2. We affirm, that all matter is not turgid, for we see it almost always remain fixt in the heart, or about the heart, or some other place. 3. This is true, where the humours are tainted with the Infection, as they commonly are, that the passages and matter must of necessity be prepared with that concoction, whereof they are capable: which we must needs say, happens in those wherein the Patients recover; because no disease can end without signs of Concoction. 4. Seeing the spirits either presently, or in a little while, sink, in this sort of Fevers, it is clear, that we must use gentle Physick, abstaining from all which favours of poison, and use such as is well corrected. But if there were burning, or an Inflammation inwardly, with chiliness of the extreme parts, purging would be dangerous: But before it come to that coldness, purging is allowed by *Hippocrates*, 2. *de vict. acut.* as is seen in the beginning of a Pleurisie, and peripneumony: Unless the Inflammation were in the natural parts, as the Stomach, Liver, &c. in which parts, notwithstanding some gentle purging is permitted, onely to evacuate the parts near the Inflammation. But that the motion of the matter is always towards the skin, as some say, is false: For from the history of the Pestilence in *Galen's* time, we see the matter crept sometimes to the Stomach, whence came Vomiting; sometimes to the Guts, whence came a Loosness; yea, we have seen it come down to the Groin, whence proceed Buboës; sometimes it has gone to the Brain, and caused putrid Lethargies, Coma's, Melancholy; sometimes it has gone to the Heart, and Swooning has followed; sometimes sudden Dropies have been bred. Whence it is manifest, that it is very good to evacuate the matter, lest it tend to some noble parts. Hence in *Hippocrates* his Pestilence, 3 *Epid.* 3. l. 80. we read, how Loosnesses cured several. Nor does it hinder, because the Infection is poisonous; for we know that *Dioscorides*, and the Ancients generally purged in curing poisons. And *Hippocrates* says, we must purge the same day in acute Diseases, if the matter be turgid, and it is turgid, when it is ready to pass out, and has no firm inclination to any one part: But in a pestilential fever, for the most part the matter abides in one certain place, and is neither ready for excretion, nor hastens to pass out. So *Galen* 6. *Epidem.* 2. tract. 9. and elsewhere, says, that it went ill with them, that had a Loosness in the beginning; but that they who had one in the state, recovered. But as for *crises*, which, according to *Galen*, they say, fall out ill in such sort of fevers, and therefore should be prevented by vaccination; in the beginning it is nothing, because they would fall out worse, if the crude matter were mo-

ved by a Purge; especially when good *crises* would sometimes follow. Therefore we may say, that we may purge in a pestilential fever; because, as *Galen* says, we must purge in every great Disease, if the strength and other things permit. But this Disease is a great one, in its own nature violent, possessing and opposing a principal part, that is the heart; and malignant. Rubeus, l. 23
9. in Cellum
c. 7.

X. Concerning Purging, we must observe this; that the seminary of the Plague (to use *Crato's* words) can be cast out by no Purgative, unless there be a great commotion made in nature, which is done with danger enough: for, although it may so be; that nature, irritated by strong Medicines; such as are made of Antimony and Mercury, may throw the vitious humours out of the body, and so cast out that poison which possesses them, and the Patients may be cured thereby, yet this is done by accident in strong bodies: But the purge it self is not primarily opposed to the pestilential poison; therefore such purges doe often harm, and by putting the Humours in motion, do cause dangerous and deadly Vomiting and Loosnesses. Wherefore there is more hope in Alexipharmacks especially, than in Purges, which if they be rightly used; there is oftentimes no need of Purges. Therefore two things should be well considered. First, The constitution of the Body should be carefully considered; and how the Patient does after he has taken his antidote, and what sort of Fever comes upon the Plague: For if the body be pure, and there be no fear of a putrid Fever, Alexipharmacks alone are sufficient, and we must doe our utmost endeavour, that the pestilential poison may be cast out to the habit of the body, as it has often been found; that Men have been delivered from the Plague by one large Sweat. But if the body be cacochymick, and the same danger in a manner may be feared from a putrid Fever, as from the Plague, after the taking an Alexipharmack, it would not be amiss to give a Purge, that some part of the matter that would conceive putrefaction, and increase the Fever, may be subtracted, to the end Nature may with more ease conquer the rest; Then we must consider, whether the Plague that is abroad, have its rise more from the fault of the Air or Contagion, or whether it do not rather depend upon some inward fault in the humours, as it happens after scarcity of provisions. If the former, there is no need of purging, but Alexipharmacks are sufficient; unless perhaps the Plague happen upon a very cacochymick body; for then sometimes purging is not unprofitable; although it be not on the score of the Plague, but onely of the putrid Fever, that would follow. If the latter, it is not onely usefull, but necessary to purge: For if bodies be full of bad and corrupt humours, they must be purged, lest they be inflamed by other Medicines, or the poison grow stronger by the corrupt humours, and disseminate it self farther, or lest those copious humours being stirred, should run to some noble part; and cause there a deadly Inflammation, and by all means lest a dangerous putrid fever should be kindled. Wherefore, if Purging be omitted, although the strength of the Pestilential poison be broken by Alexipharmacks, this Ail does often degenerate into a Disease no less dangerous. ¶ Vomits and Purges do not evacuate so universally as Diaphoreticks, and by concentrating the malignant matter they often draw Sennertius
Willis. it in, and fix it to the Bowels.

XI. Though many and strong reasons may be brought, why a purging Medicine should not be given in a Pestilential Bubo, yet because it is necessary, that we attribute much to experiments, especially in dangerous diseases, and in such wherein Art cannot be exercised; therefore in these it is necessary that we trust experiments. Wherefore I will begin with other Mens experiments, and afterwards produce my own. We have many, who at-

test they have used Purges with good success, and I am swayed with this sort of common opinion. And I know that *James Carpenfis*, the Chirurgeon, was of so great authority at *Bologna*, *Ferrara* and *Reggio*, and in my own Country, that he surpassed all other *Italians* of his time; and he, in the universal Plague of *Europe*, from the year 27 to 31 cured all that he took in hand. And I know he gave a most violent purging Medicine in the beginning and increase, when the Disease was not in the declination. Besides this, I have also another Experiment of *Gentilis*, in 4. *Canon. Fen. 1.* in which place speaking of giving purging Medicines in the Plague, he says, that the Physicians in his time used scammoniate and the strongest Medicines, with very good success, and many were cured. The authority of *Avenzoar* is subjoined, who, *lib. 3. Theistr. Tract. 3. c. 4.* gives a purging Medicine, containing a sufficient quantity of *Euphorbium*, than which there is nothing stronger in heating and drying; for it is intensely hot and dry in the fourth degree. And *Gentilis* himself attests the same. I can therefore, upon the authority of these Learned men, attest that a Purge may be given in the Plague, but I can add my own Experience, which I may better trust. In the Plague of the last year 55, I gave a Purge above 30 times, and I saw few dye. The most of them had good success, if so be the Medicine brought away a good quantity of humours, for if a small or no quantity came away, the success was bad.

Gabriel Fal-
lopius.

XII. Purging requires a second *Argus*, for as in this malignant Disease it is not very proper, so in benign ones it is sometimes very necessary. But it is not every one that can distinguish these aright. Besides also we find, that we may not give so strong Medicines, when the Plague is abroad, as when it is not abroad: for besides that the body it self cannot bear so strong Medicines, they very easily procure a dysentery.

Barbette.

XIII. I durst never give a Purge to them that were sick of the Plague before the fourteenth day, and till the Fever and the rest of the Symptoms abated. There are some that give one during the supuration of the Carbuncle, or before the *Bubo* is cured; but, whatever Antipestilentials are mixt with it, never follow their example.

Idem.

XIV. Experience confirms that a Vomit is good in the Plague, when this epidemick Disease follows a famine. Wherefore oftentimes the things that are given to sweat in the beginning, by reason of the *Cacochymie* of the first ways, usually provoke Vomit: which the use of *Pulvis Sazonicus* greatly confirms, which must be so long repeated, till the Stomach be rid of the load of bad humours by vomiting. ¶ One that had the third part of the City committed to him, which was afflicted with the Plague, cured almost all his Patients with a Vomit made of 2 drachms of any Vitriol, 2 ounces of Honey, and 6 ounces of common Water mixt together, which he gave immediately as soon as any signs appeared of the Disease being imminent or present: So that not above 10 or 12 died in his parts; whereas few escaped in the other parts.

Horstius,
l. 7. obs. 33.

Riverius.

XV. The Medicines for Cure of the Plague are either evacuating or alexiterick. The intention of the former is, that the ferous in the Blood, and the excrementitious humours that abound in the Bowels may be discharged, and together with them many particles of the poisonous infection dispersed every where in the Body. But both these Vomits and Purges, whose use is more rare, and only in the beginning of the Disease, and Diaphoreticks, which are indicated by the Plague at all times, if so be the Body can bear them, for these indeed evacuate more fully and from the whole body at once, and also by exagitating the Blood, keep it from coagulation; and seeing they move from the centre to the circumference, they drive the poisonous ferments, and the corruption

of the humours and blood far from the Heart, and force the Enemy out of his Camp: And these Medicines, whether they work by Purge or Sweat, must be such as have Particles of the same nature, rather with the poisonous infection, than with our blood and spirits. For such a Medicine passes through the divers windings and turnings of our Body, with its strength whole and untouched, and because of the similitude of them both, will more certainly take hold of the virulent matter of the Disease, and will by a mutual adhesion of parts, drag it out along with them what way irritated Nature leads. Wherefore Medicines whether Cathartick or Sudorifick, which are made of Mercury, Antimony, Gold, Sulphur, Vitriol, Arsenick and the like, are commended above all others, which seeing they are not at all subdued or conquered by our Heat, they will become very good Remedies against the poison of the Plague. For they not onely powerfully evacuate what is superfluous, but when they exert their very strong and untamed particles, and diffuse them all over the Body, they dissipate this way and that the growing ferments of the Poison, and hinder them from maturation; And since the Remedies themselves, insuperable by nature, must of necessity be discharged by some open passages of the Body, they carry out along with them whatever extraneous or hostile thing comes in their way.

Willis.

XVI. Malignant fevers, although they be destructive to many, yet they are so long private, till the Putrefaction have got the degree of Malignity, that a morbid expiration flies out, and they so become contagious: And this degree is not any mere Putrefaction, but rather a substantial Corruption, which the Seminary of the Contagion follows, which comes not from Putrefaction alone, but from a Malignant quality, wholly adverse to Nature, and therefore, unless it be suddenly removed, it removes the Man. Therefore in these Fevers we must have a care not presently to use violent hot expulsive things, such as are given in truly pestilential ones, proceeding from inspiration, which are cured by sweat and transpiration, when expulsion alone, and opening the passages, and strengthening the Heart is sufficient, and such things as resist putrefaction, unless Nature disburthen her self by breakings out, in which case expulsive things, but not strong ones, are proper. Therefore Physicians commit a great error who do not at all distinguish between private and publick contagious and not contagious Diseases; so that of a private pestilential Disease, a publick is often made, by their unskillfulness who increase the Putrefaction, and weaken Nature by strong Medicines (for private Pestilential fevers do then become contagious, when the Putrefaction is arrived at that degree, as to have a morbid expiration, in its whole substance, as a poison destructive to humane kind.) Certainly when Nature expels nothing in the Disease, nor Swellings nor Spots appear, how shall the Physician, Nature's servant, dare any such thing, and presently fly to drivers out and Sudorificks (to say nothing of hot Medicines) in the cure? Whereby oftentimes in them that are not infected with a pestilential Seminary, the humours fly to the Head, whence come *Deliria*, increase of the Fever, and diminution of the strength of Nature, which alone cures Diseases. And although oftentimes from this cause Spots appear, it does not therefore follow that they come from infection. Although when the reason is truly pestilential, and there are Seminaries in the Air, all Diseases contract malignity.

Crato.

XVII. I observed in the Pest at *Berne* which was abroad anno 1629. that Essences, Waters, Elixirs, and very hot Medicines of false Chymists did harm to many, if not all (that it was my fortune to see) and did but very few good: For by them the bodies of our People, who feed on flesh, fare high and

and live idly (and therefore are either plethorick or caco-chymick) were rendred very fit to receive the poison.

XVIII. I have several times experienced *Bezoar* stone to be most excellent both in my self and other sick people. It is two fold, Oriental and Occidental: That is preferred, if it were genuine; for it is usually so artificially adulterated, that the cheat can scarce be known. Wherefore I am more willing to use the Occidental, because it cannot so easily be adulterated as the Oriental: For seeing it consists of many shells or scales, I cannot see how Art can easily imitate Nature. When I and my Wife were last Summer taken with the Plague, I used the Occidental with good success.

XIX. It is questioned whether *Bole Armenick* be good for the Plague? If we had *Galen's Bole*, which he so highly commends, for drying without astringion, I should count nothing better: But this of ours (which all Learned men do now agree is red Ochre) dries with Astringion. Wherefore lest a dangerous Error should be committed, I think it best to abstain. We may instead of it use burnt Hart's-horn, &c.

XX. I say Treacle is very convenient with this distinction. The Pestilential fever either offends more in a manifest quality, I mean in Heat, than in an occult, that is, a poisonous one. It is indicated by great Thirst, a dry, rough and black Tongue, Heat sometimes apparent to the Touch, (for these Fevers are often gentle to the Touch) then I use to deny Treacle. Or, it afflicts the sick more with a poisonous than a hot vapour, which may be discerned by the absence of the foresaid Symptoms, and the presence of some Symptoms which favour of Poison. Then I give Treacle with great success. Or thirdly, the poisonous and hot qualities are equally joined, which I know when the accidents favour of Heat and Poison alike, and then I prescribe Treacle, but corrected with Conserve of Roses, Violets, the acid of Citron, &c. What I have said of Treacle, I would have the same understood of Mithridate. ¶ In that many mix Treacle with Frankincense, I cannot commend them, because the Head is often oppressed, therefore the matter must be diverted from that part.

XXI. The use of Spirit of Vitriol is rejected by *Johannes Baptista Sylvaticus*, first, because Vitriol, according to *Galen* and *Dioscorides* is of a corroding and sceptick quality, but such a Medicine is not safe in a pernicious Disease. I answer, That all things are not competent to the Spirit, which are so to the Vitriol. All that is drawn from a thing does not retain the nature of the primigenial substance, therefore it cannot possess the same qualities: Many parts of the Vitriol are separated from the spirit in preparation: The Spirit alone has a corroding quality, but not when mixt with other things, this is common to it with Vinegar, Juice of Lemons, &c. Mineral Waters have their virtue from Vitriol, yet they are beneficially drunk. Secondly, The frequent use of them is suspected, which is otherwise necessary to conquer so great a Disease. I answer, There is no danger, if it be mixt with convenient liquours. Thirdly, It will create Nature a Trouble, and divert her from her work, because it is an efficacious Medicine in a small quantity. I answer, It will hinder no more than the Physician, while he resists the Caco-chymie with Medicines. Fourthly, Physicians say, It is exceeding hot. I answer, The Heat is corrected, when its Atoms are separated by the mixture with another liquor, in such a proportion, that an hundred Atoms of Water are intermixt with ten or twelve of Spirit. Fifthly, *Galen*, 10. Method. suspects the use of Vitriolate waters in Putrid fevers, because applied to the Skin, they cause an Astringion of the Pores, and impart Heat to the Body. I answer, he rejects their external use, because Transpirati-

on is hindered by them. Sixthly, There are other safer Medicines, which resist Putrefaction. I answer, it is a safe Medicine, taken in a just measure and with judgment. There are infinite Witnesses of its benefit, few say, it does harm. It is not yet made appear that there are safer Medicines. Seventhly, The excessive Astringion, which is found in the Vitriol, is found also in the Oil, but Astringents are hurtfull in Fevers. I answer, It is not so great as to do hurt, there seems rather none to be in it. But all Acids do not bind, but attenuate, deterge, and open obstructions: However, grant it do bind, there is no danger from thence, because the attenuating, cutting and deobstruative parts prevail. Eighthly, although it resist Putrefaction, open Obstructions, and cause plentiful Sweat, yet it is not proper in Pestilential fevers, because it acts not safely, seeing by its Acrimony it increases the Fever and does violence to Nature. I answer, I deny a noxious sudorifick virtue joined with its heat and attenuative virtue; it is not used as an Hydrotick, but as a Resister of Putrefaction; nor does it hurt in heat, if it be well diluted. Ninthly, the Mine is uncertain, from whence the Spirit should be drawn, and Chymists do not agree which they ought to chuse. I answer, They do agree, that the *Gossarian* is proper, but that the factitious, which is made of *Mars* or *Venus*, is more noble, and that the *Hungarian* is most noble. Tenthly, there is a disagreement among them about its form; some call it Oil, others Spirit, and others Water or Phlegm. I answer, This distinction is known to skilfull Spagyrics: The Oil is for the most part thicker, nor need any danger here be feared. Eleventhly, the preparation renders it a dubious Medicine; for it is either drawn without addition, or it has something mixt with it, so that we know not whence the effect comes. I answer, It makes no matter, whether it be subjected to *Vulcan's* trial with other things or alone.

XXII. He that contends, there is no *Alexiterium* for a pestilential poison, overthrows the Principles of natural Philosophy, from which it is evident that all things are made of contraries by contraries, and that the vicissitude and instability of humane matters does depend on the repugnance and disagreement of principles. Since therefore the peculiar Remedy for the Plague, and the proper Alexiterick of the poisonous Bane, does yet lye hid in Nature's Womb, we must of necessity fly to the common Alexitericks for Poisons, and to Cordials.

XXIII. Although it be certain that one Remedy has given relief in some one pestilential constitution, yet it has been found to be useless in another; which must be ascribed to the diversity of the pestilential poison. Therefore some have likened it well enough sometimes to the Nature of a Viper, Hemlock, Monkshood, and sometimes to the nature of the Asp. See *Quercetan*, in *Pestis Alexicaco*. *Sennerius* says this is very usefull, to perform the Cure aright. Hence perhaps, the specifick Remedy being unknown, so many hundreds of Men dye, when only the vulgar Antidotes, Treacle, Mithridate, &c. are given: that is, the specifick nature of the Plague not being known, before several have died. Therefore we must not insist on one Remedy, but they must be varied, till a certain and specifick one be made manifest.

XXIV. Juleps are very necessary, yet we may not use them every where and always: I never prescribed them without adding Sudorificks, which the sequel will declare, and this is the safest way: For if the Patient use a simple cooling Potion, when the Sweat runs plentifully, both the Sweat often returns inwards, and the Poison is communicated to the Heart, whence at length Death follows.

XXV. The Sweat as it runs must be wiped off with a warm linen Cloth, and such another linen Cloth must be put to the Breast: for I have hither-

Barbette.

to observed, that Shirts, and other Linen, is never changed, but with great harm, yet its excessive moistness sometimes compells us. ¶ Let the Patient, when he has taken this Medicine, compose himself in bed to promote a Sweat, covering himself moderately, that is, with so many Clothes, as he can bear, without tumbling. After half an hour, let him take some Broth, or Beer, or Wine warm, and let this be repeated ever and anon, till you find some evacuation or other follow, and that sufficiently. But if after an hour or two none follow, nothing hinders to give the Patient a new Medicine, nay, upon urgent hazard, a third. For this you must take notice of, that unless after taking a Medicine, whether sudorifick or vomitory, either Sweat, or Vomiting or Purging do follow, or the Anxiety of the Heart be removed, or at least diminished, the Patient is in very great danger: for it is a sign, that there is a Pestilential poison either copious or very volatile, or very sharp in the Body, wherefore there is little hope. But, on the contrary, if there be Excretion either upwards or downwards, or at least plentifull Sweat, and the Anxiety of Heart and Loathing abate, and the Pulse grows greater and stronger, we may hope well of a happy Cure: And that it may be hastned, both during the Sweat and when it is ended, Cordials, mixtures consisting chiefly of Acids, may be given the Patients by spoonfulls, at short Intervals; to the end the Acid that is destroyed in them, may be restored, and that its consistence may be kept or restored to the Blood, without which it is not possible for any man to remain long alive. And still as long as any sign of the yet urgent Plague remains in the Patient, so long you must persist in Medicines, that fix a volatile Salt, temper a sharp one, and restore the Acid, lest the Poison, neglected and left to it self, recruit its strength, and surprize the too secure Patient unawares, and take him off. Certainly by this way and method I have successfully cured many Patients: But when it was neglected, I have seen many perish, and oftentimes the wilfull and careless, although I admonished them in vain, and so satisfied my own Conscience.

Idem.

Rosaceus.

XXVI. Sudorificks must be taken twice at least every day; yea, it will doe a great deal of good to use them thrice in 24 hours time. There are found some who in the space of 6 hours give a new Sudorifick, with great success. Nor is there any reason slightly to desist from the practice of these Physicians, although the Patient cry, he is well: for in a short time it will appear, the Disease has cheated you both. ¶ Who causes not a Sweat four times or oftner in 24 hours in those that are taken with the Plague, truly he will doe but little good.

Barbette.

XXVII. Diaphoreticks and Cordials, especially Acids, are in this case highly necessary, most certain, and therefore are the best, for they bring consistence to the blood, expell malignity, dissolve phlegm, in the stomach and guts, temper bile, the cause of many mischiefs. Nevertheless the variety of the Disease and its symptoms require them to be variously changed, because otherwise they would not perform what they are able to perform in an acute Disease.

XXVIII. Seeing the Pestilential poison should not onely be expelled, but moreover, does upon the account of its volatility and lixivial acrimony, indicate its alteration and correction, that is, its fixation and contemperation, we are not without reason solicitous about the matter of the Remedy indicated, and which especially fixes the volatile Salt, and contempers the sharp. And I scarce know any such among Vegetables which are able to doe it, nor among Animals, so that we are forced to have recourse to Minerals as to our last refuge: Among which, it may be, Tartar is one, or rather its distilled Oil, but because of its foetidness, and seve-

ral other reasons, it cannot conveniently be made use of. But among Minerals Salt-petre or Nitre can doe much towards the fixing of Volatile Salts: for who knows not that Arsenick, Orpiment, Antimony and such like things, consisting of a volatile Salt, are fixt by the benefit of Nitre, as well crude, as first changed into an acid spirit? It may therefore be used with good success in the Plague. But the most excellent thing, and which is worthy of a farther search, is mineral Sulphur, and that first fixed by Art, whose excellency and efficacy in fixing a volatile Salt few have observed. And I commend it to all men, and I advise them to learn to prepare the best, out of any subject whatever: for they will have a most gratefull and excellent Medicine in the Plague, and in very many other Diseases, not onely fit to fix a volatile Salt, but also to temper the same, when it is too sharp.

Sylvius de le Boë.

XXIX. Whether Garlick be convenient in the Pestilence for prevention and cure? As for prevention, if any one be accustomed to it in health, without doubt it ought not to be left off, for it were a piece of imprudence to leave off a custome in a pestilential constitution, because it is not lawfull then to give an occasion of being sick. But if he be one who sometimes uses Garlick and sometimes not, and neither finds his Head ake, nor himself hotter than ordinary after the use of it, it may be allowed him, I think, as he used it otherwise, especially in Winter time. Reapers may serve for an instance, who eat it with bread in the heat of Summer, that they may be the less offended by the heats; and sweat the less, for they better withstand it, who use Garlick, than they who abstain. Moreover it defends mens bodies from external Cold, and renders them less obnoxious to it. It performs this not by its quality alone, but as it strengthens the innate heat, so that the body afterwards is overcome with more difficulty by any cause whatever. But they who have not used Garlick; it is not safe for them to begin to accustom themselves to it in a pestilential constitution, as neither it is for them that are of a hot constitution, of a thin habit of body, Children, weak People, and they whose bodies easily waste: but they that are of a gross habit of body, of a cold constitution, and difficultly waste by transpiration, I think, they may obtain their desire in Wintertime. Besides, according to Hippocrates and Galen, 4. de 1. Viâ. it excellently preserves a man from surfeiting; and how much this disposes mens bodies for any external impression, the ill habits declare, which arise from thence. Then Dioscorides assigns great advantages to Garlick against the change of Water, both for prevention and cure. Moreover, we know by long experience, that Garlick strengthens the natural heat, raises an appetite, sharpens concoction and the rest of the natural Actions, and does not suffer the meat to corrupt; And Bodies suffer the quite Contraries to these things from the Plague; therefore, for the said Reasons, we may give Garlick with meat to him that is sick of the Plague. But if you consider it is drying, as Dioscorides writes, and that in the Pestilential fever there is a bad humour in the stomach, whereby all its actions are corrupted, especially that whereby meat is concocted, and that whereby it is retained, will you therefore reject it, because it heats more than it ought? By no means, because the Patients suffer less harm from the addition of heat, than of the pestilential putrefaction. Besides, the Heat is not in the earthy part of the Garlick, as the heat of a bitter thing, but it is in the watry part, which presently is dissolved into the habit of the body, passing immediately from the inner to the outer parts, a thing which does not a little good in a pestilential Fever. You will object, that Hippocrates, 4. de v. acut. says, that Garlick breeds Wind, Heat in the Breast, Head-ach, and Loathing of meat; But Galen asserts the

the contrary, being taught by experience; nay, he says, it cures the Head-ach, if it be given after evacuation. Therefore I advise all that are sick of a pestilential Fever as a most wholesome thing, to mix Garlick with their meat, that by its drying, and strengthening the natural Heat, it may resist the deadly prevailing corruption; and that it may discharge what is corrupted by the way of Urine, or by its violent motion to the circumferential parts, as well as for these of the Symptoms in the Stomach, vomiting and loathing meat, yet still observing custome, and the violence of the febrile heat, according to the age, complexion, and season of the year. Nor must it presently be rejected because of some contrary quality: for Galen says, It is difficult to find any thing that does greatly profit without hurt. And, as Avicenna says, the heat of Garlick vanishes in boiling; wherefore he that would use it whole, let him boil it with meat without any other Preparation; if one would break it, let it lye a day in Infusion in Vinegar or Juice of Sorrel. Besides, they say, Garlick drives away fear, which very much afflicts and wastes the spirits of such as are seized with a pestilential Fever.

XXX. Where there is great pain of the Head or Stomach, and the Patients do not sleep, Camphire must be used cautiously: Otherwise this is as it were the Vehicle of other Medicines, and makes them penetrate all over the Body and oppose themselves to the pestilential poison: yet a great quantity of it is needless, two or three grains may be sufficient.

XXXI. Let Rose or Rue Vinegar be smelled to, or let Citron rind be held in the mouth: For they who for preservation would guard themselves with Zedoary and Cloves, doe themselves a great deal of hurt.

XXXII. I know this, that Opium has a special virtue against the Plague; Wild-nightshade testifies this, which is a most effectual Remedy in the Murrain of Hogs, as Tragus writes, and, it has the virtue of Opium. ¶ I judge Opium should not be added unless to the hottest Antidotes, but such they commonly are, which are given in the Cure of the Plague; for, to omit other things which take Opium expressly into them, the noble Pulvis Saxonicus, good against Poisons, has the fruit and leaves of Herb Paris, that is, the Aconitum primum Fastidii, which cools no less strenuously than Opium; And this Antidote, as I hear from experienced persons, does abundance of good in the Plague. And Electuarium de ovo has Nux vomica in it, to which I find cold in the fourth degree attributed, notwithstanding I am as yet doubtful. ¶ It is wonderfull also that these things, how bitter soever, yet are not at all cold, as the Cocculi Levantici. This also is wonderfull, that these exceeding cold things should cause Sweat, as I have often observed. ¶ But seeing distilled Remedies seem to be preferred by me, because they sooner penetrate; and in the Plague there is need of quick penetration; Yet I would not mix soporiferous things, as Opium and the like, with other distilled things; both because I would not have them penetrate to the Heart, and because such things distilled seem to me to be made worse, and more hurtfull to our nature, but not hot things.

XXXIII. In the year 1645. the Plague (though not a cruel one) was abroad: And Dr. Henry Sayer, when others refused the charge, did boldly visit any that were sick; he gave them Medicines every day, he handled with his own hand Buboës and virulent Ulcers, and he cured several sick people. That he might guard himself from the Contagion, before he went to any infected houses he onely used to drink a good draught of generous Wine, then when he had finished his perambulation, about the very threshold of Death, he used to repeat the same Antidote. But within a short time, being so bold as to lye in the same bed with a certain Captain

(whose company he intirely loved) who was taken with the Plague, nor then did these Arts profit their Master, which had been of so great advantage to all other men, but he died of that Disease, much lamented of all that lived thereabout. About others, that were infected with the Plague, his method of Cure was usually this; If Spots or Buboës appeared not, till after he was called, for the most part he gave a Vomit, the Prescript of which was of infusion of Crocus metallorum, with sometimes white Vitriol, sometimes Roman. When the Vomiting was over, he ordered them immediately to be cast into a Sweat by Diaphoreticks; and afterwards the Sweat to be continued till the declension of the Disease, allowing some intervals for gathering of strength: But if the Tokens appeared before he was called to his Patients, he let Vomiting alone, and insisted onely on Sudorificks.

XXXIV. If in any Disease, certainly in the Plague, a most acute and very deceitfull Disease, and a malignant one, we ought to have an exact care of the sick, and not think, as soon as the more troublesome and sensible symptoms seem a little abated, that the Disease likewise is cured; for if it be left to it self, and so neglected, it undermines and surprizes the Patient unawares. Therefore I would seriously advise all Physicians, not easily to trust the Plague, however some Symptome that was formerly troublesome to the Patient, seem to be removed; for there is always a Snake in the grass, which daily kills the unwary before they think of it.

XXXV. Cauterics doe excellently well for prevention, and many Clinicks by benefit of them remain untouched, and handle them that are infected with the Plague without harm. But in the Cure we reject them, because, before they give any relief, which is after the tenth day, the Patients are carried off by the violence of the Plague.

¶ I commend after the customary Purging of the whole body, to them that are very cacochymick; the burning of the Legs or Arms with a red hot Iron, that the bad humours may constantly be diverted from the Bowels. And practice has taught us, that they are rendered the safest from the Plague, whose serotum has been run through with a Seton. ¶ Galen, 5. meth. cap. 12. writes, that in a certain pestilence of his time, all they escaped, whose bodies were full of Sores. Mercurialis testifies, that he never saw a man dye of the Plague who had a Caution. They are therefore reckoned usefull by Massarius, Mercurialis, Nicolaus Florentinus, and Fabricius Hildanus, made either in the Arms or Legs, that the ichor may continually run out by them. But the application must by no means be deferred so long, till the Plague increase and gain strength, for otherwise there were fear, lest the Ulcer should conceive Malignity and Inflammation. Therefore it is advisable to apply them in the beginning of the Plague. But to what place? Some will have them made in the Calf of the Leg, for so they think, the humours are evacuated downwards, and a greater revulsion is made: Others will have them made in the Arms, because then they are nearer the Heart, to which the Pestilence is an open enemy, and therefore a better derivation of the humours. Paræus, 1. 21. c. 2. decides the Controversie. Men must at the very first moment take away by the purging and bleeding the humours that are apt to conceive the seeds of Putrefaction and the Plague. They must suffer two Ulcers to be made in themselves, as outlets of the excrementitious humours, which are dayly bread, One in the right Arm, a little below the Epomis muscle, The other, three inches below the Knee, on the outside of the left Leg.

XXXVI. Herculanus is reckoned the first of all men who thought fit to apply Cauteries in time of the Plague: Yet this Remedy seems to be taken from the veterinary Art: For Columella, to keep

Willis.

Sy'vius de
le Boë.

Heurnius.

Joubertus.

the Murrain and Contagion from Cows, orders their Ears to be boared with a piece of *Confligo*-root, a sort of Hellebore: Which is observed by Cattle-keepers to this very day. But as to the time, they must not be deferred till the Plague increase and get strength: for then the Chirurgeon might fear lest the Ulcer might become malignant and inflamed, which many Learned Physicians do attest oftentimes to be true. Therefore it were more advisable, to apply them when the Plague begins to appear, and while its pernicious fruit is in the bud.

Glandorpi-
us.

XXXVII. That Salt has the principal place, its Use shews, whereby it preserves bodies a long time uncorrupt. We find in it exsiccation, penetration and astringent. All sower things have the second place, among which Vinegar first offers it self, then Juice of Orange and Juice of sower Pomegranates: After them are bitter things, but because they are hot, they are not so proper. New Eggs are of most easie concoction, and yield matter for the generation of Spirits: Lest therefore they be converted into pestilential matter, it will be proper to give them in this manner. Put a new Egg whole into cold water, mixt with vinegar, and there let it be three hours; then break the Egg and pour out the White, and fill up the empty space with Juice of Orange or White-wine-vinegar; add as much Salt as will make it indifferently salt; roast it on hot ashes, and stir it till it grow thick. Also draw a young Partridge, Pheasant, or Pigeon, and season it moderately with Salt: Let it remain so one day in Summer and two in Winter; afterwards put in pieces of Citron and Parsley-leaves, to fill up the hollow of the Fowl, and roast it at a gentle Fire, and when the moisture comes from within outwards, and the Fowl begins to be moist all over, strew Salt all over it, and when it is indifferently roasted, take a little of the moisture that drops from it, on your finger, and try whether it be salt; and if not, strew Salt on it again, till at length the gravy be pretty Salt. Let the Fowl be at the fire till the moisture be dried, then take it from the fire, and cut it into small pieces, and put it into a linen cloth, and let all the Juice be wrung out between two people straining as hard as they can; and give it to the Patient. Indeed it nourishes much, increases the substance of the Spirits, strengthens the Stomach, and very much resists the pestilential infection. You may doe the same with a Capon or Pullet. Nor let any one wonder why we make an Egg and the Juice of Meat salt on purpose. For when the Objectour considers with himself, that a pestilential Fever does particularly corrupt the natural Actions, namely, of the Heart, Liver and Stomach (as is demonstrated by Vomiting, Loosness, red troubled Urine, and by a disorderly Pulse) and that the pestilential infection is soonest communicated to those parts that are moistest (for moisture is the maintainance of the pestilential Contagion,) he will think what we have said is not without reason. For we know that those parts that are infected with the pestilential Contagion, are preternaturally moist, and that for that reason their actions are lost. Wherefore the food ought either of its own nature to be dry, or if such for its hard concoction be not proper, such things as may dry, must at least be mixt with it. But Salt, as we have said, is the most effectual of all things against all corruption, and most familiar to mankind. Wherefore a rational method shews that all salt things are proper for this Fever. Nor must they therefore be rejected, because they breed thirst.

Brudus.

XXXVIII. Besides, in a pestilential Fever we must take diligent care of the Stomach, that the Patient may be able to retain what he takes, otherwise we can neither help the strength, nor oppose the disease. Wherefore my reason tells me, that Salt-fish would be of use, if it be such as is

easily concocted: for it is certain that it dries the stomach exceedingly, causes an appetite and immoderate thirst, settles a subverted and nauseating stomach. As I was writing these things, it was told me, that an old Chirurgeon in England used successfully to feed people sick of the Plague, with Salt-fish, which the English call Herrings (the French, *Anchoyes*) which if he cannot have, instead of them he uses a less sort of Fish, which take the Salt and Smoke better. But you must warn your Patient to abstain from drink till an hour after eating of them, but afterwards give him as much cold water as he can drink at one draught. The use of such Fish is most effectual against the thin corrupt humidity in the stomach. And how much such Salt-fish strengthens the stomach, represses loathing, and causes an appetite, their very smell declares, whereby no small appetite is procured to the stomach. He therefore that is content with these reasons, let him use them broiled, being steeped in Vinegar or in Juice of Sorrel.

Idem.

XXXIX. It is a difficult thing to prescribe a Diet for these Fevers. For a thin one is not convenient. 1. Because it is given, that Nature may be at leisure to fight with the morbid matter: But in pestilential Fevers it is our onely care to prevent a War between Nature and the pestilential Humour, because usually in such contest Nature is overcome. 2. A Diet that is thin and easie of concoction, is sooner overcome by the violence of the pestilential Contagion, than by Nature. Wherefore although it were very usefull and necessary for the breeding of Spirits, which in such Diseases Nature most loves; yet in this Disease we may not use it. And gross Meats must not be given, because they cannot be overcome of the natural heat, as being languid, also because they do not afford matter for spirits, and they add to the cause of the Disease, although they be necessary for a greater resistance against corruption. For which reason I advise, to mix such things as afford most plenty of spirits with such as resist the pestilential Contagion. Such as it is evident they are that are dry by Nature, and immerge themselves deep into the body with a quick penetration, communicating a drying faculty to the whole, with a little astringent. Wherefore Salt and all salt things, especially such as are of a thin substance, as also all sower things, are admirably good. They indeed increase the Fever, but it is better to stop putrefaction and repair the substance, than not to heighten the Fever. Nor is it contrary to reason to increase thirst, for it is desirable, because, 1. It shews that the action of the sensory faculty in the mouth of the stomach is perfect. 2. The Patient will be delighted with cold water, and he may drink plentifully of it, which is an excellent Remedy.

Mercatus.

XL. But it is not advisable to use Salt-flesh, which the Northern part of Spain uses, because it is hard of concoction: Yet it were better to use the Juice of it when it is well roasted. The Juice of Flesh breeds abundance of Spirits, and strengthens the Stomach. Therefore it must be our great care, that we doe not offer the same meat so often till the Patient loath it. Wherefore the Physician should think with himself of divers meats, that he may use every one of them, when it is proper. All sweet and unctuous things, whatever is hot and moist, should carefully be avoided. Lentils, with much Vinegar, Salt, Saffron and Parsly boiled, are convenient.

Brudus.

XLI. *Celsus*, lib. 3. c. 7. orders the giving of hot and strong Wine in the Cure of a pestilential Fever. Which we must think was observed by him or by Physicians before him, in the peculiar and particular nature of some Pestilence. For even in our age many were sick of the Plague and recovered, who had a great desire to Wine, and acknowledged they did receive great benefit from Wine, and they

they said, they never found greater relief, in the very height of the Disease, than when they drank Wine: which their Physicians also confirmed, whereas otherwise, although it restore strength and spirits, yet it is manifest it is very hurtfull by reason of its heat. Therefore *Galen*, in giving *Bole Armenick*, which is cold and dry, distinguishes carefully whether there be a Fever or no, and whether it be small or great. And whereas several Physicians write, that Wine must not be given, because it carries the Poison to the heart, and opens a passage thither, this reason does not hold, because otherwise it were not convenient in Poisons, when yet *Dioscorides* not only permits it, but commands it, even to be taken liberally, against the biting of Serpents, and all wounds which hurt by cooling. But what can the nature of the Pestilential fever be, wherein *Celsus* commends Wine? Certainly it must be such, wherein there is much poison, and very little putrefaction, and that in cold matter: For sometimes in pestilential Fevers, the putrefaction is so remiss, that it is almost none at all, and yet the pernicious, or evil quality, is very intense.

XLII. If the Patient be troubled for several days with a costive body, with anxiety of heart, Can a man expect relief from a Purge? Costiveness is not the cause of the Anxiety, but the poison it self; Therefore proceed to give Sweats, strengthen the Heart, and be not greatly solicitous for the Costiveness. But if you have a mind to loosen, let a Suppository be used, for the use of a Clyster is not so safe: This hath done many harm at this time, and others little good, while in the mean time it no way resists the malignity. But if you will neglect this admonition, which is confirmed by experience and reason, and have a mind to give a Clyster, abstain, I pray, from Scammoniates, especially in Women and Virgins, that have their *Menstrua*.

XLIII. The appetite of meat decayed may be restored by Acids, any way taken, and especially with sweet Spirit of Salt, and *Elixir proprietatis*, either mixt with the ordinary drink, or used with cordial mixtures. Where note, that since the Pestilential poison, for the most part, uses to exert its deleterious quality in a few days, it is not worth the while, for a Physician to be solicitous for restoring the Appetite immediately in the beginning, because when poison is conquered by Acids, the Appetite returns of its own accord: but if it comes slowly, it may be repeated by often using the things aforesaid.

XLIV. Let them for whom it is expedient to fly, prudently beware, that they be not forced to make their journey through a Pestilential Air: because it has so fared with many, that while they contrived to prevent danger, by their flight through a Pestilential Air, as soon as they came to their desired Country, they immediately died; or because, while they make their journey with more haste than usual, they are tired and weakened; and the humours are immoderately moved and troubled, whereby they are the readier for the susception of a noxious quality. There happens also from their travel, a necessity of breathing oftner and larger, by reason whereof, the poisonous Air, such as it comes, is more plentifully received. Besides, every sudden change is grievous to nature; and the humours in several plethorick and cacochymick persons are heated beyond measure in their journey, and when they are hot, they put on a noxious quality. But he that withdraws himself from the infected Air, must go, before the Calamity overrun all his Country, into some part differently situated from that where the Plague begun, but a gentle pace, for fear of the foresaid disturbance.

XLV. I remember that the Chirurgeons in France, in the time of the Plague, put on a singular Habit, not made of Cloth or Wool, wherein the seeds of the Poison might easily stick, but of Line, compressed

and smooth, which they put off at their return from their care of the infected sick. The *Italians* use the same artifice, and I am told, that in the late Pestilence at *Rome*, which destroyed the City Anno 1656. the Physicians were clad in a singular habit. They carried a Staff without a knot in their left hand, as a mark of their conversing with infected persons. They had a Mask covered with infected persons. They had a Mask covered with wax all over their Face, and their Head too, that their Hair might not take the Infection. They had Glasses before their Eyes, and their Nose was inclosed in a long Snout, full of Alexipharmacks and good scents. In this necessary and safe, rather than decent Habit, Physicians visit the Infected, and Chirurgeons safely handle Buboes, and feel the Body when it is full of Spots; and if they found the spots bunch out, and the Hickup come upon them, they foretold certain death, which was a certain sign of death in the Plague in our City, Anno 1619, as a Th. Bartholinus, cent. 5. ch. 67. Chirurgeon, who was hired to cure the sick, affirmed to me. ¶ To these things you may add one thing more wonderfull, if those that visited the Infected, did constantly carry in their hands burning-Torches, or live Coals, they were safe from the Contagion, as *Marsilius Ficinus* affirms. *Epid. antidot. cap. 24.*

XLVI. Let the place, in which the Patient lies, have a hole open above, that the Pestilential Vapours may fly out especially while he sweats. This hole may be opened and shut by turns: for when proper Fumes are made, with Camphorate Rose-water, and other things, the place may be shut, and then opened again.

Sydenham's way of curing a Pestilential Fever.

XLVII. As for the cure of these Fevers, the first place indeed is owing to curatory Indications, which in general must be this way directed, that either following Nature's Guidance exactly in exterminating the disease, we may lend it a helping hand; or not at all relying on that method which Nature is accustomed to use in subduing this intestine Enemy, that we may go upon a different one. If any one reply, That the business may be done by Pestifugous Alexitericks: Yet it is doubtfull, whether the good they doe should be ascribed to their manifest quality, by which, in causing Sweats, they also open a way for the morbidick matter; or, to some occult disposition, which Nature has bestowed on them, to extinguish the pestilential Infection. Wherefore, first of all, let us consider the former Intention, which has this tendency, that Nature may be helped, in her own way and usage, to exterminate the morbidick matter. We must observe, in the true Plague, that Nature, if she be neither forced, nor do err, does her business by some Abscess, breaking out in the Emunctories, whereby a passage is made for the matter: But in that they call a pestilential Fever, this is done by the whole superficies of the body, by means of Sweat and Transpiration. Whence we may gather, that according to the different way and course, that Nature foreshews you, a different method of cure ought also to be taken. Namely, if one endeavour to discharge the matter of the true Plague, by means of Sweat, he goes a way contrary to Nature, which endeavours it by Imposthumes: And on the contrary, he that tries to discharge the matter of a Pestilential fever any other way than by Sweat, he takes a course not at all agreeable to the duct and inclination of Nature. But in the true Plague it does not as yet appear, with what proper and certain sort of remedy the ejection of the morbidick matter, that is, the breaking out of Imposthumes may be promoted, except one should think, that a strengthening Diet, and Cordials, might conduce to it: Which yet I should much doubt, whether they might not cast the Patient, who is too hot already, into a far greater heat.

I have

Rubens in
cit. loc.

Barbette.

Sylvius de le
Boë.

Joubertus.

Th. Bartho-
linus, cent. 5.
ch. 67.

Montanus.

I have by experience found it certainly true, that Sweats in this case are to no purpose, although I cannot deny, that after great Sweats, of three or four hours continuance, and then broke off, the Swelling does appear; which I do not think proceeds from the Sweat, because while it lasts, no sign of Breaking out appears; indeed when the Sweat is ended, it may, by accident, appear; that is, when Sweat has taken away some part of the burthen, which loaded Nature more than it should, and when the body is put in a violent heat, by taking of things to cause a Sweat. But how fallacious and treacherous the extermination of this peccant matter, by Imposthumes, forced out in Sweats, is, I call to witness the tragick ends of such as have been thus treated, of whom, scarce the third Man escapes the danger of the cure and the Disease: But on the contrary, many, who have had their Swellings break out in a laudable manner, have recovered their health in a short time. But that the Crisis of this Disease, by tumours, is very hazardous, is manifest from hence, that sometimes a Bubo, which at first broke out laudably, and with the abatement of the Symptoms, does afterwards, all on a sudden, disappear, and instead thereof Purple Spots, most certain tokens of Death, do succeed. The cause of whose striking in seems of right to be attributed to those great Sweats, that are designed to promote the Eruption, because they, by drawing and dissipating, do disperse another way, by the habit of the body, that good part of the matter, which should fill and keep up the bulk of the Swelling. However it is, this at least is most certainly sure, that out of God Almighty's great benignity, there is a certain way to remove the morbid cause in other diseases, but in this the way is but slippery and inconstant. From hence it follows, that the Physician, who in the cure of other diseases is bound to follow Nature's duct and propensity very close, must here refuse its guidance.

Wherefore, since it is by no means secure to tread in Nature's steps, in exterminating this Disease, we must now look about us, by what means we may satisfy the second intention, that is, of endeavouring another, and a different solution from the natural. And this, I think, may be done two ways, that is, by bleeding, or by Sweating. As to the former, I am not ignorant that many make conscience of Bleeding: But not to heed the prejudices of the Vulgar, I first of all appeal to those Physicians that stay'd in London in the time of the late Plague, whether any of them observed, that plentiful and repeated Bleeding, before any Swelling appeared, proved mortal to those that were sick of the Plague? We need not at all wonder indeed, that the letting of a little blood, when the Swelling begins to appear, is always hurtfull: Because when only a small quantity of blood is taken, hereby the management of the affair is taken out of Nature's hand, which applies her whole strength to the protrusion of the tumour; nor is there any other way of evacuating the morbid matter, efficacious enough, substituted in its stead. And when the Swelling already appears, and blood is then let, seeing it draws from the circumference to the centre, it causes a motion quite contrary to the motion of Nature, which is from the Centre to the Circumference. But, that bleeding in the Plague is convenient, many grave Writers have long ago adjudged. But there is onely one that I know of, who places the whole business of the cure, such as we require, in bleeding plentifully, that is, *Leonardus Botallus*, a most famous Physician of the last Age, I, saith he, think there is no Plague for which this may not be more wholesome than any other remedies, so it be used opportunely, and in a convenient quantity: And I think it has sometimes proved successful, because it was used either later, or less than was necessary, or because there was an error about using it in both respects. And a little after. But in so great a timidity, and spare

detraction, how can any one rightly judge, what good or harm it does in a Pestilential Disease? For the Disease, for whose cure the taking away of four pounds of blood was necessary, in which onely one is taken, if it kill a Man, does not therefore kill a Man, because blood is let, but because it was not let in a just quantity, or it may be not seasonably. All which he confirms by experience, and goes to examples of cures. But here I will relate a very rare history of a matter, as it was acted with us in England. When among the calamities of a Civil War, the Plague also raged in several places, and, by chance, was brought from some other place to *Dunstun-Castle* in *Somersetshire*; after some of the Soldiers had died suddenly with Spots, and it had seized several others, a certain Chirurgeon, who was returned from travelling in far Countries, who, at that time, among others, served for pay, asked leave of the Governour of the place, that he might doe his best to help his Fellow-soldiers, who consenting, he took immediately from every sick Man, at the first coming of the Disease, before any Swelling appeared, a great quantity of blood, till their feet began to fail them, for he bled them standing, and in the open Air, nor had he any Porringers to measure the blood in; this being done, he sent them to lie down in their huts, and although, after bleeding, he used no remedy at all, yet, of abundance, whom he treated in this manner (which is a wonderfull thing) there died not one Man.

But although I am not onely sensible of the benefit of this practice in my judgment, but have long since found it so indeed by experience, yet the dissipation of the Pestilential ferment, by transpiration, pleases me, upon several accounts, better than Evacuation by Bleeding, because it does not so much weaken Patients, nor expose Physicians to the danger of Infamy. But this also does not want its difficulties; for, first of all, Sweats are difficultly procured in several people, especially in young Men of a hot constitution: Which sort of Patients, the more you endeavour to raise a Sweat by strong Hydroticks, and heaping on much clothes on them, the more danger you bring them into of a Phrenzy; or, which is of a sadder portent, being held so long in expectation, at last, instead of Sweat, you will produce the Tokens. For seeing the principal fault in this Disease consists in the more spirituous part of the mass of blood, wherefore the exagitation of the more gross particles, is for the most part more languid, than in other inflammations; and this thinner portion being put in a greater rage, by the accession of new heat, does, at length, by its assault, wholly break all the fibres of the blood, distended beyond the measure of their texture; from which dissolution of the fibres of the blood, I think the cause of the Tokens may be fetched: For just as the Marks that are inflicted upon some muscular part of the body, by a violent blow, so they at first appear very red in the Skin, and in a short time after appear black and blew. But then in bodies that are apt to Sweat, if the Sweat be broke off sooner than it should (that is, before all the morbid matter be dissipated) the condition of the Buloes, which indeed began to come out well enough, towards the latter end of the Sweat, becomes worse afterwards; for part of the matter being subtracted, which ought to raise them, they either easily strike in again, or they never come to legitimate abscesses (as it usually happens in the Small Pox, whenever the Patient has Sweat violently in the first days) and then, at length, the cruel enemy being received within the walls, a commotion is raised in the blood, by means whereof oftentimes Spots, the Tokens of imminent death, are forced out.

And I continued this custome of bleeding freely to which also the use of Ptisane (and such cooling Diet) was added in many Patients, with wonderfull success, till at length, failing of the wonted success, in managing of some, out of the wilfulness of some By-standers,

By-standers, who were possessed with vain Prejudices, and would not suffer a due quantity of Blood to be let, to the Patient's great damage, from whom (at least while the scope of Cure turned on this hinge) either Blood was not taken in a sufficient quantity or not at all; I perceived a great stop put to my endeavours, and therefore I reckoned another way of opposing this Disease than Blood-letting, if it could be found, would be of great use.

First, if the Swelling did not yet appear, I bled moderately according to the Patients strength and constitution, which when done, sweat, the raising whereof otherwise had not onely great difficulty in some bodies, but also danger of greater burning and of the purple Spots was threatned, became easie and expedite. And the benefit of the Sweat that did immediately follow did abundantly compensate the loss of blood, which otherwise, how small soever it were, had brought a most grievous inconvenience. After bleeding (which I ordered in bed, when all things were ready to cause a Sweat) without the interposition of the least delay I presently covered the Patient with clothes, and bound a woollen rag to his Forehead; which covering of his Forehead conduces more towards the raising a Sweat, than one would easily imagine. Then, if there be no Vomiting, I give these and the like Hydroticks; Take of *Theriaca Andromachi* half a drachm, *Electuarii de ovo* 1 scruple, *Gascoin's Powder* 12 grains, *Cochinelle* 8 grains, *Saffron* 4 grains, with a sufficient quantity of Juice of *Kermes* make a *Bolus*, which let him take every sixth hour, drinking upon it 6 spoonfulls of the following Julep; Take of Water of *Carduus Benedictus* and *Scordii compositæ* each 3 ounces, Treacle-water 2 ounces, Syrup of Clove-gilliflowers 1 ounce. Mix them.

But if a Vomit interrupted, as it often happens in the Plague and pestilential Fevers, I deferred the giving a sweating Medicine so long, till the Sweat began to run onely with the weight of the clothes (except that now and then his face was covered with the Sheet to gather the Vapors:) For, which indeed is very well worth the observation, when the rays of the morbidick matter extend themselves towards the outside of the body, immediately the Looseness and Vomiting that proceeded from them tending inwards, and falling upon the Stomach and Guts, cease of themselves, so that how great soever a subversion of the Stomach precede, the Medicines that are taken afterwards may well enough be kept, and conduce to the raising a Sweat according to desire. I ordered the Sweat, when it was begun, to be continued for the space of a natural day, by drinking now and then a draught of Sage posset-drink, or of Mace-ale, strictly forbidding him to wipe all that time, no, nor so much as to change his Shirt within 24 hours, till the Sweat was ended, how wet and foul soever it were; A thing which I would have observed with the greatest care. But if Sweat be circumscribed in a narrower limit of time, the Symptoms immediately grow as fierce as ever, and the Patient's safety, which a longer Sweat had put out of all danger, is in extreme hazard. And, truly, I cannot sufficiently admire, why *Diemerbroeke* and others are persuaded on so slight a pretence to break off Sweat, as forsooth to provide for the Patient's strength; for there is no man that hath been the least conversant in the Cure of this Disease who observes not, that as soon as the Patient is all in a Sweat, he finds himself stronger than before. What my practice and experience hath taught me in this matter I will not be afraid publickly to maintain. Many, through my advice, when they have been thrown in a Sweat for 24 hours, have been so far from complaining that they found themselves weak after it, that they rather professed, that as much supervacaneous humour as they had lost, so much new strength they had acquired. And about the latter

hours I observed, not without admiration, a certain Sweat burst out, more natural, kindly and copious than the first, which the strength of Medicine had forced out, and which gave much more relief, as if it had been plainly critical and eradivative of the whole Disease. Moreover, in the very height of the Sweat, I do not see what inconvenience it brings along with it, to refresh the Patient with Broths and comfortable Spoon-meats; and therefore the objection concerning want of strength to bear long sweating falls to the ground. And we may see (which shews the benefit of this practice) that as long as the Patient runs with Sweat, he apprehends himself well, and all that are by think him in a good condition: But as soon as the body begins to grow dry, and the Sweat is broke off, all things grow worse, the Disease as it were returning afresh.

For 24 hours after the Sweat is ended, I order him carefully to avoid the Cold; to let his Shirt dry of it self; to drink all his drink warm; and to continue the use of Sage posset-drink. The next morning I give him a Purge: And by this method of Cure I recovered very many of pestilential Fevers; so that not one died of that Disease, after I began to practise this method.

But when a Swelling was risen, I hitherto would not suffer a Vein to be breathed, in a body never so indisposed to Sweat, fearing lest the morbidick matter returning into the emptied vessels, the sudden death of the Patient should prevent the designed Sweat. Nevertheless perhaps blood might be let safely enough, if immediately as soon as it were let, without any stay interjected, Sweat were raised, which produced to the foresaid time requisite, might consume and dissipate the Swelling; and that with much less danger of health, than if a legitimate ripening of the Imposthume, which in a hazardous case is very uncertain and fallacious, were longer expected.

Sydenham

XLVIII. I was never concerned for watching, although it continued for the three first days. The Headach abates the first day, is tolerable the second, the third is removed onely by the use of Sudorifics. *Opium* has a Sudorific quality, it in a great measure makes up Treacle, *Dioscordium*, Mithridate, &c. which in my opinion would want a Sudorific faculty, if they wanted *Opium*: Yea, it is reckoned by Authours among Alexipharmacks themselves, whose use is singular in every malignant Fever. And certainly, I believe, there is not one Medicine to be found, that is able to give the Patient ease so quickly as *Opium*, and concerning whose operation more certain things may be predicted; whoever use it frequently and circumspectly, than of *Opium*. Nevertheless at this time I used it sparingly, contrary to custome, because Sleep is very much suspected for the 2 or 3 first days. But when Watching had held a man 6 or 7 days, with a decay of strength, the Medicine following did much good, giving a spoonfull of it every quarter of an hour; till the Patient fall asleep. Sleep is produced by it and plentiful Sweat. Take of our Prophylactick water 1 ounce and an half, Borage water 1 ounce, Cinnamon water 3 drachms, *Confectio Hyacinthi* 1 drachm, *Sacchari perlati* 4 drachms, *Laudanum opiatum* 2 grains. Mix them. Therefore you may use *Opium* the foresaid way. Nor is there any reason here why you should be too bold in using it in cacoymick persons, those that are weak and have a foul Stomach, or that you should be too timorous, and content to use it in no case; for by this means you most evidently declare, that its virtues are unknown to you. Before I come to *Laudanum opiatum*, I endeavour to remove the Headach by the following means. Let Ground-Ivy bruised be applied to the Head, also Plantain. Let this or something like it be applied to the Soles of the Feet and the Palms of the hands. Take of leaves of Rue 1 handfull and an half, Sowre Leyen 2 ounces, Pi-

geon's dung 1 ounce, common Salt half an ounce, Elder-vinegar what sufficeth. Mix them. Make a Cataplasin; Or, Take of Bole-armenick, *Terra sigillata*, common white Chalk, each 1 ounce and an half; Marigold-vinegar what is sufficient. Mix them. Apply it as before. Sometimes also I applied Powder of Cloves wet with Spirit of Wine; for, I think, Vinegar does harm.

Barbette.

XLIX. A Loosness in the Plague is often a forerunner of instant death. Yet I have often known when neither blood nor bloody matter has been voided, that the things following have done good. Let the Patient and the Physician abstain from all acid and salt things, of much use otherwise in the Plague: As also from plentiful drinking; but if he cannot bear his intolerable thirst; let the Patient take 2 or 3 spoonfulls of this Mixture. Take of the root of Tormentil 1 ounce, red Rose flowers 1 pugil, shavings of Hartshorn half a drachm, seeds of Sorrel, Myrtle, each 1 ounce; Boil them in Steel-water. To 9 ounces of the colature add of *Confectio Hyacinthi* 1 drachm, Syrup of Myrtle 1 ounce. Mix them. Treacle alone has done good to many, if a small piece of it has been taken once an hour till a drachm has been taken. Binding Clysters, drying also and emollient ones are here very necessary; yea, they should be given twice or thrice every day. Lees of White-wine or rather of Red-wine, applied hot to the Navel have done much good.

Idem.

Sylvius his method of Curing the Plague.

L. Like as upon examination of all the Symptoms that usually accompany the Plague, and upon consideration of the Remedies, that serve for prevention of it, we have concluded that in most the nature of the deadly poison consists in a volatile and sharp Salt, so we think the same will be confirmed from its Cure. But that a methodical and rational Cure may be insisted on in the Plague, not onely the Functions must be considered which are primarily and chiefly hurt, but the parts also as well containing as contained, which are affected above others. The Functions are they especially that are called Vital, and among them, those that respect the alteration of the Blood in the Heart; and on which life does proximately depend. Among things contained, either the whole Blood, or some things concurring to produce the mass of blood, or both are disaffected in the Plague. Among the parts containing, and the solid, we observe both the conglobated Glands to be seized and corrupted by Buboës, and the external skin with the parts adjoining by Carbuncles and Spots. It is manifest, the Blood it self is very much changed in the Plague, when we affirmed, that it oftentimes loses its consistency, and is more fluid than ordinary. And because we believe that all consistency comes to the Blood from an acid Juice, we deservedly conclude that the Acid, mixt, or to be mixt with the Blood, does most suffer and is corrupted in the Plague. Since moreover we have shewn that an Acid can so powerfully be broken and therefore corrupted, by nothing, as by a Lixivious Salt, I think we have deservedly derived the Pestilential poison from it. Again, when we weighed its quick operation and extreme violence in Reason's balance, we concluded this lixivious Salt was volatile and very sharp. And seeing among all the Humours hitherto observed in our Bodies, onely Bile is found to partake of a volatile Salt, we plainly think that we judged according to reason, that it is often vitiated by the pestilential poison, and is rendred more sharp and volatile than usual; So that the pestilential poison joins it self to the Bile, as to an humour most homogeneous with it, and spoils it; But that it exerts its violence upon the Acid, as upon a thing opposit and heterogeneous, and breaks and corrupts it. The pestilential poison, I say, because at least as

far as most Physicians determine, is not bred in Man's body, but comes to it from abroad, and then is afterwards communicated to others by Contagion: Therefore the Indications to be observed in the Cure of the Plague must be taken, 1. From the Poison it self admitted from abroad into the Body, and infecting the Bile, both corrupting and infringing the acid Juice, and colliquating the Blood it self, and destroying the solid parts, by Buboës, Carbuncles and Spots. 2. From the Bile it self degenerating from its pristine integrity, and putting on the nature of a pestilential poison. 3. From the acid Juice in our Body, broken and corrupted. 4. From the Blood it self melted, and destitute of its consistence. 5. From the conglobated Glands producing Buboës. 6. From any parts seized and corrupted with the virulence of the Carbuncles. 7. From the whole *Superficies* of the Body defaced and sometimes corrupted with many Spots and Tokens.

First of all, the pestilential Poison it self, as it is admitted into Man's body beside the Laws of Nature, so it indicates its reciprocal expulsion out of it. The same, as it infects all it meets with in the body, and changes it from a laudable state into a noxious, it indicates its alteration and correction. Secondly, Bile, as it is made more volatile and sharp by the pestilential Poison, does indicate its fixation and contemperation. Thirdly, the acid Juice of the Body, as its acid Acrimony is broken and corrupted by the pestilential Poison, indicates the reparation and restitution of the same Acidity. Fourthly, the Blood, as it hath lost its consistence by the pestilential Poison, indicates the recovery of the same. The fifth, sixth and seventh Indications of Buboës, Carbuncles and Spots, we shall treat of peculiarly and severally. Now we will propound the *Indicata* of the foresaid Indications.

1. The pestilential Poison, seeing it frequently penetrates the inner parts by the Pores of the Skin, it may most commodiously be expelled by the same, and therefore by Sudorifics. The same, because sometimes perhaps it is inspired in with the Air, and doth then also alter and corrupt the Spittle, which being continually swallowed down causes loathing in the Stomach, it may not inconveniently then be driven again, at least in part, out of the body: And when part is carried off by Vomit, the rest that passes with the Air to the Lungs, and by and by to the Blood, may most conveniently be thrown off by Sweat with those foresaid Diaphoreticks. The same Poison, as it is noxious in its quality, vitiates and changes for the worse whatever it meets with in the body, and that indeed by its salt, volatile and sharp quality, it may be corrected by a powerfull fixing Medicine, and one that takes off the acrimony. And because nothing has such a fixing and assuaging virtue as Sulphur, but fixt, therefore such a virtue may well be expected from every such like Sulphur, that is, either fixed or fixing, suppose it either metallick or mineral. 2. The Bile, that is rendred too sharp and volatile by the pestilential Poison, will be fixed and tempered with the same Medicines with which the former was. 3. The acid Juice broken and corrupted by the pestilential Poison, will be repaired by the use of Acids, such as are convenient for every one's particular constitution. 4. The Blood will recover its consistency by the taking of Acids, not much at once, but at several times, and always in a small quantity. But since there are so many Indications in the Cure of the Plague, it will be the prudent Physician's part to select and make use of such matter for Remedies, as may answer most Intentions, that he may kill several Birds with one Stone, and that those that are infected with the Plague may be cured with Medicines not at all compounded.

Sylvius de le Boë.

LI. If one will compare all things we have taught, concerning the matter of the *Indicata* in the Cure of the Plague, he may without much difficulty observe, that the primary Cure of the Plague may be performed with a very few Medicines, simple enough, that is, with Vomits, but Antimonial ones especially: with several sorts of Sudorifics, and they in like manner Antimonial ones: with things that fix Salt and Bile which are too volatile, among which Antimonials are not the last: with things that repair the Acid, deficient both in the blood and elsewhere, which are not wanting in Antimony, so that of one, and it may be of Antimony alone, Medicines may be prepared which may satisfy all Indications in the Plague. Volatile, oleous Salts will be good to provoke Sweat, and to drive out the pestilential Poison, and to temper the over sharp Salt and Bile. Acids, and especially Spirit of Nitre will serve to correct Salt and Bile offending in too much volatility and acrimony, as also to restore a consistency to the Blood, and to repair the Acid that is made dull in the Body. So that any one seems to have need but of three Medicines at most, happily to perform the internal Cure of the Plague; and, 1. Vomits, when they are proper. 2. Sudorifics, but consisting especially of Volatile, Oleous Salts, because they also temper the acrimony of the poison. 3. Acids, among which Spirit of Nitre should be preferred, because it is endued likewise with a fixing quality; but most of them must be diluted with convenient aqueous things, that they do no harm.

Idem.

LII. Nay sometimes Vomits and Sweats may be joined together, and Sweats and Acids, or at least in the middle of a Sweat some sub-acid mixture may be given by Spoonfulls, I say, sometimes Vomits may be joined with Sweats; for it does no harm to take them together, and to have them work together, since they are not motions contrary one to the other, but different, by Vomit and Sweat. (See Book 19. of Vomits.) Therefore in the Cure of the Plague, when Loathing is urgent, and Strength is good, a Vomit may safely be given in the beginning, made of Antimony, but which may also have the faculty to move Sweat, that is, that which they call *Antimonium diaphoreticum*, but not too much fixt, or something better, if any man have such a thing, or some other Sudorifick may be joined with any other antimonial Vomit, either made of the same Antimony or prepared of the same matter.

Idem.

LIII. It is not difficult to understand from the rules of Physicians, that a method must be observed in the Cure of a pestilential Fever, different from what they have laid down in other Fevers; As we may gather from the drying Meats, from the astringent things, from the gross Diet, and the larger indulgence as to Meat and Drink; All which things we carefully prohibit in all other Fevers, whence *Celsus* thought good to cause thirst in this Fever.

Brutus, de
Vitu Febr.

LIV. It sometimes happens, that Swellings break out, when neither a Fever, nor any other grievous Symptom has gone before: although I am suspicious that some shivering or shaking has ever gone before, but not so perceptible. But they to whom this happens, it is safe for them to walk abroad in the Streets, and to go about their business, as healthy people do, neglecting all care of Regimen.

Sydenham.

Febris Petechialis, or, The Spotted-fever.

The Contents.

Whether, when Spots break out, a Vein may be bled? I.

Whether we may purge? II.

Whether a Vomit may be given? III.

Wine has been wholesome. IV.

The Spots are an imperfect Crisis. V.

I. BE gone ye *Hemophoboi*, who, as soon as ye see Spots in the Skin, superstitiously abhor Blood-letting. For to pass by, that Nature, when she is eased of part of her burthen, does rise with greater courage against the reliques of the matter, it is most certain, that these cutaneous efflorescences are symptomatick, and the unloadings or things cast over-board by the exsultating blood, which therefore requires Phlebotomy. But grant they were critical, yet without doubt the *Crisis* would be but half, and as it were a dimidiated abscess, unequal to the Disease, which it is meet to help, going Nature's way, carrying what should be carried by proper ways, what way they have an inclination. But the motion of the Spots, and opening a Vein is the same, from the centre to the circumference, from the inner parts of the body to its superficies; so far are the Juices that are drawn to the Skin, from retreating or altering their course upon breathing a Vein. For when the Veins of the Limbs are emptied, does not the Blood by a certain continuity flow out of the greater and inner Veins thither, to fill the empty place. Who therefore dare deny, that the Blood is carried by Phlebotomy not from without inwards, but from within outwards? Wherefore even in internal Inflammations, also in Grief and sudden Fear a Vein must immediately be opened, to disperse the Blood and Spirits, gathered in the Bowels. And although after Bleeding Sleep sometimes oppresses a Man, because of the dissipated Spirits, which Nature would rally, yet it is justly forbid, lest the Remedy be frustrated of its end, namely, the Diffusion of the Blood from the inner to the out parts.

Menotius
de Febr. ma-
ligna.

II. Evacuation by stool is no way agreeable with Spots in a Burning fever, although sometimes it does good. I have seen indeed some of them that have been in that condition freed by a Loosness, yet they are much better and safer freed by Sweat, because the malignant Juices are averted from the Bowels. But I have far oftner seen Purging by Art do such good, than a spontaneous Loosness: nor undeservedly: because in the former Nature endeavours outwards; but for the Juices to go inwards spontaneously is a sign of great weakness, but to be drawn by Medicine, not so: for what is caused by an external cause, should not be imputed to the Disease: Therefore it has done many good to purge in the beginning, and so to have a care through the whole course of the Disease, that the body be not costive, because we can no way better prevent the Symptoms whereby all such people are commonly in danger. Yet I have learned both, for the aforesaid reason, and by sufficient experience, that it is very dangerous for this Disease to be judged by a spontaneous Loosness. ¶ You must not purge by stool unless there appear to be a great quantity of Juices, the discussion whereof you cannot expect by the Skin.

Vallésius.

Idem.

III. Vomits in Malignant fevers with Spots are generally useless, unless perhaps you perceive much humours to be contained in the Stomach; for then it is lawfull to cast up by Vomit what is there contained, especially if the sick Party be easie to vomit, otherwise no Man must be forced to vomit, lest the motion of the humour, that is otherwise vitious, be recalled inwards. For the mouth of the sto-

F f 2

mach

Vallesius.

mach is of too sharp a sense, and too near the Heart and the Head, for the malignant juices to be gathered thither. ¶ In the Year 1659. I had under my cure a Maid 36 years old of a most cholerick complexion: In a violent Fever she had abundance of Purple, red and blew Spots arose. She had not the Small-pox, which were then Epidemick: At the very moment the Spots broke out, an exceeding anxiety came upon her, the cause whereof she could not express: I, suspecting that Bile did vellicate the mouth of the Stomach, to the vomiting whereof she was accustomed, give her warm water, a little while after she had drunk it, there followed a plentiful vomiting of a eruginous Bile, and the Spots presently vanished; and the Small-pox came in their room, whereof she did very well.

Bartholinus.

IV. Galen 1. ad Glaucon. c. 14. condemns Wine in Fevers, especially Burning ones, with a Delirium. When the Spotted fever, anno 1659. was Epidemick in our City, N. was come to that pass, as that there was no hope of his Life. But when he understood that he must dye, he sent a Messenger to the Bishop to entreat a Glass of Wine of him, for he expected the fatal hour, which was presently granted him in a larger measure than he expected. After a draught of Rhenish Wine, he fell in a sweat and a sleep, and the Fever was judged to health, although he relapsed sometimes because of his error in diet, yet without harm. ¶ Helmont de Feb. cap. 12. Sect. 7. contends violently with strong reason for Wine, so as to allow it in the Plague. ¶ Cesar Crivellatus, as he confesses, cap. 22. de usu vini in acutis, recovered of a Spotted fever by using Wine against the Physician's mind. ¶ In the Year 1676. a Malignant fever was Epidemick at Borgo di Sessa of which more died than escaped, live worms came out at all their Mouths. A Physician, who would try what would soonest kill them, sprinkled some with Oil, others with juice of Citron and Vinegar, and yet they were not killed: At length, when he had sprinkled Wine on them they quickly died: Hereby being emboldened, he gave his Patients Wine without scruple, which afterwards was the most gratefull Alexiterick of that Fever, whereby almost all escaped safe.

Augenius.

V. I never to this day have observed, that Nature perfectly judged this Fever by making an expulsion of these Spots to the Skin, which is consonant to reason: For if the Mine of this Putrefaction be kept in the mass of blood, how can it be that the Fever should be judged by these cutaneous spots? This is certain, That Nature does not evacuate well when it evacuates a little. And these Spots are very small in comparison to the corrupt and poisonous humour. Then the matter that causes the Spots, is too thin to be the Basis of the putrefaction, and certainly utterly insufficient for the extirpation of it. But all the hope of safety in this Disease must be placed in letting blood at the very first; and afterwards in purging and sweating, and sometimes in purging by Urine.

Febris Pleuritica, Peripneumonica, or, A Pleuritical and Peripneumonical Fever.

Its Description and Cure.

WHEN in the Year 1675. the season continued extreme, like Summer, till the latter end of October, and a cold and moist season followed that, there were abundance of Coughs abroad, which prepared the way for a Fever, and most readily

turned into one. In the mean time, as the Cough helped the Constitution in producing the Fever, so also the Fever, taking occasion from the Cough, did just invade the Pleura and Lungs, as it had invaded the Head the Week before these Coughs began. Which sudden change of the Symptoms gave nevertheless some men occasion (who took not so good notice) to take this Fever for an Essential Pleurisie, or for an Essential Peripneumony, although it remained the same, as it had ever been through the whole Constitution. And how much soever a pricking pain in the side, difficulty of breathing, the colour of the Blood that was taken away, &c. did intimate that there was an Essential Pleurisie, yet this Disease required no other Method of Cure, than what suited to the Fever of this Constitution, but it was very much abhorrent from that which was proper for a true Pleurisie. Besides, a Pleurisie, when it is the primary Disease, for the most part, invades at that time of the year which is between Spring and Summer, and as it were joins them both. This Disease being born under another Constellation, must be reckoned onely a Symptom of the Fever, that was proper to that Year, and the product of an accidental Cough.

That we may rightly proceed to that Method, which Experience told us was owing to the Coughs of that Year; we must observe, that those Effluvia, which were wont to be sent out of the mass of blood by insensible transpiration, were turned inward by the Cold contracting the Pores of the Skin, and fell upon the Lungs, by irritating of which, they after raise a Cough. And seeing by this means the hot and recrementitious Exhalations of the Blood are detained, that they cannot pass the Pores of the Skin, a Fever is easily kindled in the mass of blood, where, that is, there is either so great store of Exhalations, that the Lungs are not sufficient to cast them off, or by some adventitious heat, either of Medicines or Regiment, that are hotter than they should be, the fire is augmented, as if Oil were thrown into it, and he that was already inclinable enough to a Fever, is thrown headlong into one. Leaning on this foundation, if the Cough had not brought the Fever, and those other Symptoms, which we told you for the most part joined themselves with it, I thought it sufficient to keep my Patient from flesh, and all manner of strong Liqueurs: I advised him to use moderate Exercise, and to take the open Air: He drank now and then some cooling pectoral Ptilan. These little things were sufficient both to conquer the Cough and the Fever, and to prevent other Symptoms. For as by abstaining from flesh, and spirituous Liqueurs, and also by the use of cooling things, the blood was so contempered, as to be less apt for a febrile Impression; so also by the help of Exercise the hot Effluvia of the Blood, which, when the Pores of the Body were stoppt by sudden Cold, being driven inwards; raised a Cough, did more opportunely exhale, and were dispersed, to the Patient's great benefit. As for stopping of the Cough, danger was not wanting in attempting it by Narcoticks and Anodynes. Nor was there less danger, if one attempted the same by spirituous Liqueurs and hot Medicines, because when the matter of the Cough was inviscated and hardened both these ways, those Exhalations, which leaving the Blood quietly and insensibly, by Coughing vanished into Air, now when a passage was denied them, being shut up in the mass of blood, caused a Fever there. And this oftentimes succeeded very ill with many, who, while they endeavoured to put a stop to the Cough by burnt Brandy, and other hot Liqueurs, did invite Pleuritic and Peripneumonick Affections. Nor were they in a less error, who would by provoking Sweat, exterminate the Cause of the Disease. For

though

though Sweat burſting out ſpontaneouſly, does often expell the morbiſick Cauſe above all other Remedies whatever, yet it is clear, that while we extort it, we inflame the blood, and may kill him whom we would cure.

The Fever and its worſt Symptoms were beſt oppoſed by bleeding in the Arm, and a Blister applied to the Neck (for a pain in the Head, Back and Limbs followed the Cough) and by giving a Clyſter every day. In the mean time I adviſed my Patient, every day to keep up from his Bed for ſome hours, to abſtain from fleſh, and to ſup ſome Ptisan or cooling, lenient Broth, &c. When two or three days were over, if the Pain in his ſide were not abated, but troubled him ſtill violently, I took away ſome blood a ſecond time, and I perſuaded him to continue yet the uſe of Clyſters.

While in this manner we allowed the Diſeaſe time, that the Blood might by degrees get off thoſe hot particles, that were fixt on the Pleura and Lungs, all the Symptoms uſed quietly to vaniſh. Whereas they that ſet upon the Diſeaſe in a hoſtile manner, making as it were War with a huge force of Remedies, either loſt their Patients; or at leaſt were forced to redeem their Life by bleeding, oftner repeated, than the nature of the Diſeaſe did require, or indeed did ſafely admit. For whereas in the true Pleuriſie repeated Venæſeſion does the whole buſineſs, and is alone ſufficient for cure (if ſo be, that over hot Medicines and a regiment which fight againſt it, do not hinder.) On the contrary in this Symptom it was ſufficient to open a Vein once, or at leaſt twice, if ſo be the Patient were allowed to riſe from his Bed, and uſe a cooling drink. But there was no neceſſity to take blood away oftner, unleſs where the ſaid Symptom was very much increaſed by the acceſſion of heat from without: Nor even in this caſe was it without danger altogether.

Sydenham.

Febres Puerperarum, or, Fevers of Women in Childbed.

The Contents.

The Deſcription and Cure of a Milk fever. I.

Of a Putrid fever. II.

Of a Symptomatiſick fever. III.

Whence we muſt take the beginning of the Fever, from the day of bringing to Bed, or of the coming of the Fever. IV.

I. **F**EVERS of lying-in Women are reckoned as it were of three ſorts, a Milky, a Putrid, and a Symptomatiſick fever. The Milk fever ariſes, becauſe when the Breasts are filled and much diſtended with Milk, the blood-veſſels are compreſſed ſo that they cannot eaſily tranſmit the blood that flows that way: Whereupon the blood being ſtopt in its Circuit, begins to be tumultuous in the whole maſs, and when the Spirits are inordinately moved, and wholly confuſed, it conceives an efferveſcence, and makes a ſimple *Synochus*: Or becauſe the matter of the Milk tranſverſes the blood, a great ſhare whereof is in the Maſs of blood, and having left the Womb, that Liguor is tranſlated to the Breasts: Which if it exceed the due ſtore of the nutritious juice, and ſo all of it cannot be aſſimilated, but moreover abounds with heterogeneous parts, it does as ſome extraneous thing, and not miſcible, create trouble to the blood, and a febrile efferveſcence of three days continuance is ſpent in throwing of it out. This Fever is wholly committed to Nature, and as long as the *Lochia* go

right, proceeds for the moſt part ſucceſſfully enough, without the help of Phyſick, for after the efferveſcence of the blood, which is finiſhed in three or four days, either plentiful ſweat, or free tranſpiration ends this affection. Yet in the mean time above admiſſion of Milk, we muſt obſerve that it is uſual for them that will not give ſuck, within two or three days after they are brought to Bed, to cover all their Paps with ſome aſtringent Plaſters, (as *Emplaſtrum de Minio*, &c.) for ſo the glandulous ſubſtance of the Paps is a little contracted, ſo that they do not ſo readily receive the milky humour, that way ſcurient. Yet this ſort of remedy muſt be cauſiouſly uſed, leſt if milk be wholly excluded or forced too violently out of the Breasts, as it reſtagnates ſuddenly into the blood, it cauſe a diſorder of the ſame, a forerunner of a Putrid or a Malignant fever.

II. It proves a very difficult taſk to Phyſicians, to cure the Putrid fevers, becauſe all manner of Phyſick is accounted by the Vulgar, not onely uſeleſs, but hurtfull for lying-in Women; wherefore Phyſicians are rarely called; but when there is no place left for Remedies, and all opportunity of doing good is over. But a twofold *Methodus Medendi* ought to be gone upon, (as in contagious Diſeaſes) a Prophylaſtick and a Therapeutick. Although this Fever, how Malignant ſoever it be, is never got by contagion, and thoſe that are by need not fear the taking of any poiſonous infection from without, yet all Child-bed Women have an inbred Mine of Virulence: Wherefore they have need of an exact Regiment, to the end that after their Delivery, the impurities of the blood and humours may be rightly purged without the danger of a Fever. Therefore theſe three things muſt be inculcated to Phyſicians. Firſt, that they preſcribe an exact courſe of Diet, namely to feed of Oat-meal Caudle, ſometimes of Beer, ſometimes of white Wine and Water mixt together, ſometimes of Panada, and other light things, for a Week at leaſt. Becauſe they are much emptied, they may ſup ſomething the oftner, but no ſolid or ſtrong food muſt be given them. For I diligently obſerved, that the over haſty eating of fleſh and dainty food has brought theſe Fevers: For lying-in Women ſhould be treated not onely, as grievouſly wounded men, but as having got a febrile indiſpoſition, from the diſturbed frame and temper of the blood: Becauſe the blood in them has long ſince been too much exalted, and being as it were touched with an impure Infection, upon the acceſſion of any ſulphureous ſewel, it quickly takes fire.

After Diet the ſecond care is, leſt the pores be cloſed, or the *Lochia* ſtopt by careleſly admitting the outward Cold: For upon a very ſmall occaſion, when the order of tranſpiration is altered, the blood which was before efferveſcent, is diſordered: And the Womb alſo at the approach of the Air contracts it ſelf and the mouths of the Veſſels, ſo that the *Lochia* are ſtopt from running; wherefore I would have Women kept at leaſt five days in Bed.

The third intention remains; that the flux of the *Lochia* may be continued by a gentle proritiation of the blood. The cure departs far from the method uſed in Putrid fevers. For in this we muſt not expect, that the blood touched with a febrile burning, ſhould cool gradually, and then that it ſhould conquer the aduſt recrements gathered in its maſs, and ſeparate them by *crifis*: But rather (as is done in a Malignant fever) aſſoon as the blood begins to be in an immoderate ferment, it is convenient that it be gently firred by Diaphoretick Medicines, and that its heterogeneous and impure mixture be caſt out. Wherefore among the vulgar (and that not amiſs) it is the cuſtome, preſently to give Sudorificks. By this means the Blood being eventilated its Efferveſcence is ſtopt, and the *Lochia*, that are apt to be ſtopt, by

by the agitation of the blood, are provoked to run. When therefore a Lying-in Woman is first taken with this Fever, we must forthwith doe our endeavour that the fewel may plentifully be subtracted from the burning blood, by a prescribed Diet, and forbidding of flesh and broth thereof. In the mean time all cold and styptick things must be equally avoided: for they fix and thicken the blood too much, and hinder its purging, which is very requisite, both by the *Lochia*, and by cutaneous transpiration. But rather, although the Fever be urgent, let moderate hot things be given, Decoctions, or distilled waters of Marigold flowers, leaves of Pennyroyal, Mugwort, roots of *Scorzonera*, and Bezoartick powders, Spirit of Hartshorn, fixed Salts of herbs, &c. If the *Lochia* be stopt, we must doe all our endeavour that their flux may be again promoted. If the Belly be bound, it must be loosed with an emollient Clyster. We must have a care of too violent provocation; for it is manifest that in Child-bed, as well as in a Malignant fever, by much going to stool the strength is spent, together with a fainting of the Spirits. If at any time, with a suppression of the *Lochia*, there be a disturbance in the blood, vomiting, thirst and watching, I have known *Laudanum* mixt with Saffron often given with good success. 2. If notwithstanding the use of these Remedies the Fever still grow worse, and be sensibly encreased with a worse apparatus of Symptoms, as if, besides Disorders in the Blood, the Brain and Nervous parts begin to be affected, Medicines, though many of several sorts be tried, are oftentimes able to doe but little good, yea in this case the Indications do co-incide with those that are to be used in the Plague it self: since the *Lochia* when they have been some time stopt, cannot easily, or scarce at all, be brought again in a great confusion of blood and humours. Therefore it is good to quicken the motion by Diaphoreticks, namely, that the corruption impressed on the blood and nervous juice, and reëmanating from the Womb, may in some measure be cast off by sweat and insensible transpiration. Wherefore here Bezoartick Powders and Confections, Spirit of Hartshorn or Soot, Tincture of Corals or Pearl, are good. I have seen sometimes a little hope appear, by the help of these Medicines, with the Pulse and other Symptoms growing better for a little while; yet the cure seldom succeeded: but when the use of these Cordials was left off, the Patients forthwith died with a weak Pulse, as soon as ever a Looseness came. 3. While the condition of the Patient does still grow worse, as when with the encrease of the Fever the Pulse is weak and unequal, and there are frequent shakings and convulsive Motions in the whole Body, with a *Delirium* and Stupidity, then the Physician, having first given the prognostick of Death, must insist on a few remedies, and those generally onely cordial; and let him abstain from Bleeding, Scarifying, Blisters and Cupping-glasses: for such administrations onely beget hatred and calumny, so that for that reason they are accounted as Executioners, and hard hearted, among the Women.

III. The acute Diseases of Lying in Women are sometimes attended with some notorious Symptom, that is, Quinsey, Pleurisy, Peripneumony, Dysentery, Small-pox, and the like, and then they carry the names of these affections: I judge that all these Symptoms proceed from a certain Coagulation of the blood, and from an Extravasation of it. But while the Blood is extravasated in one part, all its natural and critical Efflux is stopt in another, wherefore there is danger, lest while the blood, begins to be coagulated, either in a particular and usual focus of congelation, or universally in its whole mass, the running of the *Lochia* be forthwith stopt, which truly usually happens, and therefore these Diseases are usually mortal to Lying-in Women.

Among these the Quinsey, Pleurisy and Peripneumony, because of the Analogy of their Cause and Cure, may be considered together. When a Lying-in Woman is affected with any of these, at the very first we must endeavour, that the Blood, which is fixt any where, and begun to be extravasated, may be restored to circulation, and not cause an Imposthume, because Lying-in Women are very seldom, when they are taken with these Symptomatical Fevers, cured either by abscesses of the matter or spitting. Wherefore internal Remedies, which melt the blood, and free it from Coagulation, must be used, such as are especially Diaphoreticks, full of a volatile Salt, as Spirit of Hartshorn, Soot, Urine, and also the Salts themselves: also testaceous and bezoartick powders, *Lapis prunelle*, Decoctions and Juleps of Vegetables that provoke the *Menses* or Urine, among which things appropriate to the Womb may be mixt, not neglecting things externally discutient. In the mean time let the impetuous motion, and immoderate effervescence of the blood be put far away, and the recrements thereof be still carried downward by all means possible, frictions, &c. By bleeding, if the plethora be great in the whole, and the inflammation very acute in any part: And if necessity be urgent, in the Arme; after this, another bleeding in the Legs (if it can be admitted) may follow. But I must caution you, that you must be very careful how you practise bleeding in these cases, for unless it give ease (which I know seldom so happens) presently, the Pulse grows weak, and the Patient's condition grows worse. A Dysentery has its rise commonly from the like cause with the foresaid affections: But in this, because the extravasated blood is presently voided, nor being retained in the body does it create trouble there, and corrupt still more; and since this way of evacuation is near the uterine Flux, and does not derive it another way; Therefore less danger is feared in this Disease, than in the foresaid: Yet oftentimes this Disease is mortal to Lying-in Women, because by the dysentery things attemperating the blood, and moderately astringent are indicated, but these are observed too apt to stop the Flux of the *Lochia*. Wherefore in this case, till Lying-in Women are sufficiently cleansed, let the cure of the other Disease be omitted, let the violence of the Symptoms be restrained onely by assuaging things. The Indications of the Small-pox do not onely differ from the above said, but are accompanied with such as are contrary one to another: For the Flux of the *Lochia* requires to be stopt moderately; yet in the mean time so, as that the Efflorescence of the blood and a gentle Transpiration may be continued. For seeing in this Disease the poisonous ferment is twofold, and the corrupt particles of the blood are carried outward two ways, we must have a care that the less and fraiter part, do not draw to its Threshold, either all the matter, or more than it can let out. Therefore lest the *Lochia* running too freely should call in the Poison, that is apt to fly outwards, the Womens Diet must be a little altered, and things that are alexiterick and astringent (as root of Tormentil and Bistort) must be boiled in their Caudles. Also Powders, Juleps, and things that are endued with such a virtue, must be given at due Intervals. Moreover in this case the Women must by no means be allowed to eat flesh or the broth of it, or to rise from their Bed: But when rest both of Mind and Body is procured, and a Diet ordered of such things as do not exagitate the blood, the matter commonly may be wholly committed to God and Nature.

IV. It is much disputed, whence the beginning of these Fevers should be computed, that is, whether from their very delivery, or from the sense of a Fever. Nevertheless it makes not much matter, whether the controversy be decided this way or the other. For because this Fever does not equally

Willis.

bly run through the usual stages of Putrid fevers, nor will have a crisis, nor admit the use of a Purging Medicine at all, we have no reason to be at all solicitous, about its period, or the measuring it out into days.

Febris Quartana, or, A Quartane-Ague.

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I. They are not to be hearkened to, who do not allow of Blood-letting in a Quartane-Ague, unless the redundance of it appears by the signs of turgid Veins, and other ways: for there is always, from the beginning, a Plethora ad vires, unless it follow other long Fevers. And Galen's rule is worthy of great commendation, *1 ad Glaucon*, where, if the blood, that is first taken away, appear black, and foul, he would have a greater quantity of it taken away; but if it be red and pure, he would have but a little taken away, and bleeding to be repeated no more. ¶ But although this rule sometime hold good, yet it is not always true; for as *Avicenna*, 1. 3. tract. 4. says, *Oftentimes the blood begins to run thin, but in the process of the evacuation it is thick and black*, because the blood that was without was good, and that within corrupt, and putrefaction lies hid in the inner parts.

II. A young Man being tired out with a Quartane-Ague, forced the Chirurgion to take more blood from him, than was convenient for the disease, or than he had strength to foregoe. By which rash sort of remedy, the Ague was so far from being abated, that it was rather much increased; and, by exhausting the fountain of life, it deprived the Body of its colour and comeliness, leaving the *Præcordia* puft up, his Legs swollen, his Stomach weak, and a continual loathing of Meat. And he always remained so weakly, that in the smallest Diseases he fell into most violent Symptoms continually. Therefore, whoever you are, do not rashly irritate a Quartane, which kills no Man: You cannot doe it scotfree, but you may easily make it worse.

III. Their opinion is to be laught at, who would have concoction tarried for, before blood be let, because at that time it is more fluid and thin: for it is better concocted and prepared, if its quantity be first diminished.

IV. A Purge in the beginning must not be strong, for we must deal gently with a Quartane-Ague, all the beginning of it: by reason the humour, that is the cause of it, because it is contumacious, and resists expulsion, unless it be abundantly prepared, is irritated by strong Purges, and being irritated, it grows more fierce, and instead of a single one, it becomes a double Quartane. Therefore Antimony, and such things, should not be used in the beginning. ¶ Yet we ought not always to fear Purging in the beginning of Quartans; for if they arise from some other disease not well purged, we should utterly purge out the evil by the root, as *Hippocrates 2. de morbis* advises. Otherwise, some proceed here with so much scruple, that they affirm, we should not Purge at all; because they have observed, that Purges doe not any good, yea, they often wear out the strength without remedy, by farther depauperating the Mass of blood, preferring such things as exalt and volatilize what is fixt, and cause a spirituousness in the Mass of blood, such as are Spirit of *Sal Ammoniack*, Flowers of *Sal Ammoniack*, with *secula Aronis*, Salt of Tartar, Volatile Spirit of Sea Salt, &c.

V. The major part of Physicians agree, in giving Vomits in the beginning of the Fit; because Nature at that time is most prone to that evacuation. And there is no question, but to give a Vomit in the beginning of a Fit, and to repeat it several times, when the Fits begin, makes the Disease milder and shorter. ¶ Vomits are used with great benefit, which are the proper remedies of a Quartane-Ague, especially in those natures, that discharge their Liver and Spleen into the Stomach, and cause Reaching and Vomiting in the beginning of the Fits. For this purpose, 1 drachm of *Asarum* mixt with Whitewine may be given, yet with this caution, that if at once taking it remove not the Ague, it be repeated once a week, preparation and purging being used between whiles. ¶ It is convenient to evacuate by Vomit, especially if the Patient be inclined to Vomit: for although the melancholick humour may seem rather to require to be Purged downwards than upwards, because it is thick and earthy; yet because Quartanaries, through the weakness of their concoction, and the length of the Disease, gather much crude humours, which must be carried off by Vomit, so the matter is subtracted from the Quartane, and also the melancholick humour often regurgitates from the Spleen into the Stomach, whence it may conveniently be evacuated. *Saxonia*, almost every Fit, gives a Vomit, with great benefit; and experience shews, that nothing is better than this remedy. And *Galen* used White Hellebore, first with Rhadish, then without. But the Moderns use their gentle Vomits, as *Oxymel*, with a decoction of Rhadish, &c. And if the Patients be strong, *Helleborismus Heurnii* may be used: It is an extract of White Hellebore made by decoction: But it must very seldom be used. Concerning the time of giving a Vomit, we must take *Avicenna's* advice, who prescribes a Vomit either before or after Meat. After Meat the Patient Vomits more easily, but with less benefit: But if he be inclinable to Vomit, it is better before Meat: So it draws better from the Veins, because the virtue of the emetick is not abated by mixture with the Meat: Therefore it will be the best way not to use Vomits for once, but oftner; and if it be given on an Intermission-day, one will Vomit more easily, and with less trouble after Meat: but on the Fit-day, because the humour is easily moved, and it is hurtfull to give Meat, it is better to give it fasting, according to *Trallianus* his advice: Wherefore the English doe ill, who, when they take Vomits in the Fit, swallow a great deal of drink, which is very hurtfull, as experience often shews, that the Fits are thereby made more grievous and long, and the Stomach is weakned. ¶ Seeing a dull and gross matter

Encbir. Med. Pract.

Riverius

Encbir. Med. Pract.

Præmedicinal.

Idem.

Riverius.

Tulpius, l. 4. c. 53.

Riverius.

matter is peccant in a Quartane, which greatly resists the commotion of Medicines, it must be evacuated at that time, when it is disturbed by Nature, and altered by putrefaction: which, since it is at the time of the Fit, it must also, at that time, be evacuated. Which experience also perswades, for I have cured several Quartanaries by giving them Hellebore: But we must have a strong subject to work upon, otherwise it would be a mischievous Medicine.

Per. Sallus
Diverius,

VI. Although Hippocrates de Affect. n. 17. approve of Purging in the Fit, yet his opinion, lib. 4. de morbis, should rather be followed; where he reprehends the old Physicians, for Purging on odd days: because the humour is moved on those days: Wherefore no wonder, if after the body is disturbed by the motion of the humour, a new trouble arising from the Physick, do put the Patient in certain hazard. Indeed, there is some danger in Purging, when the shaking coming on disturbs it begun; and there is a contrary motion of the humours in the Fit to that which the Physick makes, whence a great disturbance may arise in the Body. But if we prescribe it, not indeed when the paroxysm is instant, but five or six hours before, so that the evacuation may be finished before the Fit come, without doubt it will turn to the Patient's advantage; for that part of the humour, which would cause the Fit, is taken away, and Nature is eased of part of her burthen. And let gentle Catharticks be chosen, which do not disturb Nature. Thus the Physick will not produce a motion contrary to what Nature intends, because they are made at different times, and do not concur; for purgation is supposed to be finished before the coming of the Fit. Let us in this place hear the solid judgment of Fernelius, l. 3. c. 12. "On a quiet day Purging is safer; on a disturbed one, more expedite: for when the Disease gives less trouble, and the recollected spirits are stronger, the violence and operation of the Medicine may better be born: but upon what day the Disease is exasperated, and the disturbed matter is in motion, it is more readily carried off. And a little after; "In the intermission of Agues, a Medicine should be given so long a time before the Fit, as that the purgation may be complete before it: because in the Fit the matter turns not to the Belly, but often another way, and oftentimes the Purging is stopt by the violence of the Fit, yet it is better to give a Purge before than after the Fit, and the day before a Quartane, than the day after. Yet gentle Purgatives may be given an hour before the Fit, to check it, which make revulsion of the humours rather, by irritating Nature, than by Purging the humours. For this pilula de Sagapeno Camilli, commended by Quercetan, and by Stockerus in his Empirica, are famous, onely one of which is given in the beginning of a Fit, continuing it for some days, for they have a virtue of dissolving gross and tartareous humours, and not onely of Purging.

Portis.

VII. Because Melancholick persons usually abound with crudities, we must therefore first take care of the pituitous before the melancholick humour, which must be got out of the first ways, first by Vomit, then by Clyster, and last of all by a gentle Purge.

VIII. I judge, the cure of Quartans differs from the cure of other Agues in this, that in Quartans Medicines are requisite, which more effectually cut glutinous phlegm, and now and then diminish it; but carefully used, till the glutinousness of the phlegm, being by degrees overcome, obstructions may be opened: Besides which, according to the diversity of the other humours that offend, more or less, other Medicines must be prescribed, which are proper to correct them, and sometimes also to diminish them. Which method, if the Physicians prescribe, and the Patients follow, and if

they observe a good course of Diet, they find a happy cure of their Quartane within a few weeks. As it falls out on the contrary, when either the Physicians, out of an inveterate prejudice, or desire of contradiction, condemn what they are ignorant of, or are too wise to imitate; or the Patients being morose, and obstinate neglect their Prescription.

Sylvius de le
Boë.

IX. If there be any disease, which deceives a hasty Physician, it is a Quartane, which makes its Crisis not by Days, but almost by Months. The history should be remembered, which is cited by Borellus, cent. 4. obs. 33. Mr. N. says he, more than once, told me of the death of his Father, who perished by the too much bleeding and purging of his Physicians, while he was ill of a Quartane. This disease is exasperated by such remedies, and turns to a double or a treble Quartane, wherefore we should rather have recourse to Specificks.

X. Sennertus, lib. 2. de febr. c. 19. premising what should be premised, from Pedemontanus, commends singularly 2 drachms of the powder of Asarum in a Glass of Cretan Wine, drinking it warm one hour before the Fit, causing Sweat with clothes: which being over, he orders, to take Sage, Rue, Shepherds-purse each 1 pugil, to beat them with a little Vinegar, and tie them to the wrists, and keep them on 24 hours, upon which the Ague ceases. The Asarum thus taken, besides Sweat, causes Vomit, and towards the end of the Fit it also purges downwards.

XI. I give those that are ill of Quartans onely a decoction of Turneps for several days. I was told of this by the excellent Gainerius, who writes, how he cured an Abbat more successfully by Turneps, than by any other Medicines. Pare them and boil them, throw away the first water quickly, pour to them some new fair water, and boil them to pieces, squeeze out the juice carefully, and Sugar and fresh Butter without any Salt. If the Patient be subject to Wind, add some Cloves cut a little.

Crato, Conf.
256.

XII. Although there be remedies, which may stop the Fits, and so hide the Ague, that is, hinder Nature, from separating the pure from the impure, by the ebullition of the humours, in her allotted time, and so at length from conquering the Ague; yet they are dangerous, and usually cast the Patient into a worse disease, unless they also evacuate, or that Evacuators, as they ought, have been given before. ¶ Narcoticks indeed have an excellent virtue to stop the Fit; But unless the greater share of the morbid humour be first evacuated, and obstructions much abated, they may do mischief, because they retain the vitious humours in the body, and breed obstructions, and other more grievous diseases: Yet if they be given in a small quantity, and mixt with aperient and inciding things, they will doe the less harm. ¶ The last year Was very fruitful in Quartans: The remedies which oftneft gave help, were such as stop the Ague-fit; for when the indisposition of the blood is a little amended, by the alteration of the season of the year, if the habitual custome of the Fits be but broke a while, Nature recollects her self. And such an intention, though sometimes it may be answered, by giving Vomits a little before the Fit (for they often stop the febrile motion of the blood, by raising a motion contrary to it) yet this Indication (the stopping of the Fit) is far more certainly, yea and successfully, performed by the use of Medicines, which do not at all evacuate the bowels, but give either a fixation to the blood, or a præcipitation of the febrile matter for a time. Wherefore, those I had under cure, provision being made for the whole, giving sometimes a Vomit, sometimes a Purge, three hours before the Fit, I used to order the Patients to apply Plasters to the wrists, and to take some Febrifuge powder in generous Wine, and to Sweat gently in their Bed: It seldom so happened, but at the first or second time the Ague-fit was in this manner stopt, and then the same remedy being repeated, but the Disease went perfectly off. ¶ When

Hoflerus,
Herc. Med.
l. 6. c. 3.

Riverius.

Willis de
febr. c. 6.

a tough

a tough Ague tires a Man out, many fly to Enchantments and Spells (or *Periapta*) which doe many good, and stop the Fit. Some of them, by an evident and Physical reason, by virtue of Medicines applied: Others onely by Opinion, to wit, when a firm Assent, and certain Hope do second Imagination. For the Spirits and innate Heat, the chief Instrument of the Soul, being excited and made brisker by the Soul, confirmed and strengthened by such an imagination, do stir up the natural force, languid and asleep before, which afterwards resists the Disease, which, if it be already in a great measure broken, as it is in the declension, it is easily conquered, and utterly taken off by the strength of Nature, who is the curer of all Diseases. But in the beginning and increase of the Disease, when the matter is much and contumacious, they may not be used: for though Nature be strong, she is unable to overcome the morbid cause. Such things therefore should not be neglected, when the Disease declines apace, and is already broken by other Medicines. The other sort is of them, which may doe good on a Physical account, that is, applied to the Wrists, whose virtue reaches the Heart, by means of the circulation of the blood (to the interruption of which, the original of Agues is assigned by many) and do stop the turbulence and fermentation of this and the febrile matter: namely, some corpuscles, or *effluvia*, do pass from them into the blood, which violently fix and bind its particles, or by melting and moving, do, as it were, precipitate: Either way the spontaneous effervescence of the blood is hindered, just as when cold water is poured into a boiling pot. ¶ But to these Enchantments, or *Periapta*, which Dr. Willis speaks of, I would object the authority of the learned and pious Sennertus, who, l. 5. p. 4. c. 10. seems to condemn all such things as Diabolical. His words are these: "The healing of the Wound, which is attributed to the *Unguentum Armariæ*, is, for the most part, Nature's work (which often cures, not onely slight Wounds, but most grievous ones:) Which is evident from hence, that there are so many several compositions of this Ointment, and some use onely a piece of Bacon instead of it, and nevertheless the wounds are cured. But if by using this Medicine any grievous wound be cured, which seems to be above the power of Nature, it is done by the power of the Devil, who, by some compact, either implicate or explicite, is drawn to cure the wound. Nor do they remove the suspicion of this matter, when they object, that all simples are natural; and that no Characters, Conjurations, or Incantments, are used, either in the composition or inunction: For the Devil does not onely hide his compact under them, but also under natural things, if at his command (as it is done in the first and explicite compact, in which others, who use the same, may unawares involve themselves) if natural things be turned to other uses, than what GOD created them for; And thus Diabolical and Magical Actions are wrapt up and obtruded as Magical ones. If therefore Sennertus allows not a natural thing with Incantment, Why should we follow Willis his Fancy, deluded by Enchantment, though he give a natural reason for it?

XIII. If the body be costive, I judge moistning Clysters of a decoction of Speedwell, and *Carduus Benedictus*, may very well be given: And I can truly say, that I cured a Great Man (when he despised all other remedies) onely by the use of Clysters; but this must be done in them, who in the beginning of the Fits have a griping in their Gluts.

XIV. I have heard from a famous Physician, that he was almost killed with a Quartane, and was cured by an Empirick in this manner; First of all he used Fomentations to the part affected in the beginning of the Fit, that in process of time he might carry off the matter: For it must be carefully ob-

served, what part of the body is ill at the coming of the Fit; and that must be carefully fomented. *Idem.*

XV. But I think it is better to mix Alteratives with Meat, than to give them alone, as the trivial Physicians of our times use to doe, who, unless they give Syrups, Apozemes, distilled Waters, Electuaries, and Purging Medicines, they think they doe nothing deserving a good Physician. And hence it is, that weak persons being glutted with the repetition of them, loath them, and that they are not aright reduced into act in the Stomach, which is the cause that they operate unhappily: Wherefore it is certain at that time, that they doe not onely no good, but much harm, seeing oftentimes, because of them, sickly and weak persons loath their food, and are thereby weakened. But they that follow Hippocrates, and acquiesce in his advice, 1 *Epid.* who says, *You must exercise your self in this, that at least, if you doe no good, you may doe no hurt*, will reckon it far better, not to give a thin diet, nor alterative Medicines alone; but to mix with things, that nourish and breed good chyme, such things as may by little and little amend the morbid intemperature of the parts. (You must understand these things of a Quartane, which follows other diseases.)

XVI. As for the cure of Quartans, There is no man, I suppose, that is but moderately conversant in this Art, who can be ignorant, how little all these methods answer expectation, which have hitherto been designed to take off this opprobrium from Physicians, if we except the Peruvian Bark, which yet oftner procures truce for the Disease, than conquers it: For when it has lain hid a fortnight or three weeks, to the great emolument of the Patient, who, having been ill handled by it, gets in the mean time a little breath, it comes afresh, and is as bad as ever; and, for the most part, let this Medicine be never so often repeated, the Disease is not conquered under a long tract of time. Nevertheless I will relate, what I have experienced, about the method of giving it. We must have a care above all things, that this Bark be not given too soon, that is, not before the Disease have spent it self a little (unless the decay of strength in the Patient requires it to be given sooner.) For there is not onely fear, that it may be rendered ineffectual by its too hasty use, but that the Patients life may be endangered, if we give a sudden check to the blood, as it is cleansing it self, with all its might, by fermentation. In the next place, part of the febrile matter must not be subtracted, neither by Purging, nor much less by Bleeding, to the end the Bark may doe its office more freely: for seeing, by either of these things, the oeconomy of the body is spoiled in some measure, the Fits will so much the sooner, and more surely return, as soon as the virtue of the Powder is spent. I think it more to the purpose, if we lightly tinge the blood with the said Medicine by degrees, and a long time after the Fits, than for us to try to kill the Fit, when it is just coming, all at once; for by this means, both more time is given to the Medicine, to doe its work in, and all the danger is avoided that may arise to the Patient, from the sudden and unreasonable check, whereby we endeavour to oppress the Fit, when it is growing strong, and exerting it self with all its might. Lastly, this Powder must be repeated at such short Intervals of time, as that the virtue of the first dose may not be spent, before another be given: For by this often repetition, an *æstus* (or good habit) will at length be recovered, and the Disease quite driven away. Being perswaded by these reasons, I prefer this method to all others; Let 1 ounce of Bark of Peru be mixt with 2 ounces of Conserve of Red Roses; and let the Patient take the quantity of a large Nutmeg morning and evening, every day, that is, without a true Fit, till he have taken the whole. Let it be repeated again three times, fourteen days always between.

XVII. The Reverend N. a sanguine Man, forty years old, after another Fever in Autumn, fell into a Quartane: of which, when about Spring-time, he was a little better, N. foretold him, when he was in a neutral state of health, that he would be grievously sick, but might recover, if he had a care of taking Physick. He trusting to this Prognostick, refused all help of Physick so long, till first an abundance of humours fell from his head, and parts thereabout, upon his left shoulder, which being neglected, with a slow defluxion interfect the left Muscles of the Belly, where an Inflammation arising, abundance of filthy Pus breed, and he died a little after. ¶ When the Disease is removed, the Patient must be carefully Purged: for it were incredible to tell, what a power of Diseases arise for want of Purging after Autumnal Fevers. And I wonder this is so little taken either care or notice of by Physicians. For whenever I observed a Man in years to be taken with an Ague, and that he neglected Purging, I could certainly foretell, he would afterwards be taken with some dangerous disease, though he little dreamed of it, as if he had been perfectly cured.

Wierus.

Sydenham,
Obs. p. 104.

her Stomach: Moreover, the region of her Stomach, and her left Hypochondrium was beset with an hard, renitent, and exceeding painfull swelling all over: besides the use of Clysters, there was no room for evacuation, because of the lowness of strength: Her Stomach loathed any the most gratefull Medicines. In this difficult case, which was circumscribed within narrow bounds of cure, I advised these few things, namely, twice a day to take two ounces of *Aqua magistralis lunbricorum*, with six drops of *Elixir proprietatis* in it. Moreover, I ordered a fomentation to be applied to her Stomach, of leaves of Pontick Wormwood, Centaury, Southernwood, with Roots of Gentian boiled in a Pot well covered: and after that a Toft of Bread, dipt in the same liquor, to be applied upon the region of the Stomach. Besides, I ordered febrifuge Plaisters to be applied to her Wrists. And by these remedies only she mist her Fit the third day, and remained free from it afterwards; and then in a short time she perfectly recovered by the use of chalybeate Medicines.

Willis, c. 6.
l. de feb.

II. The illustrious *Veslingius* and I several times visited *Andrew Argol*, the famous Mathematician, when he was very old, and lying ill of a kind of Quotidian ague (with long defillations, yet not customary to him; when the Spring was far come on) of which he recovered not so much by Medicines, as by abstinence, concoction of the humours, and strengthening of the innate heat being procured thereby: For he took nothing but *Alcetic Pills*, called *Aloephangini*, and *Cichory Broth*. A rare example in our times, but very conformable to the Prescriptions of the Ancients, with whom such Abstinence and observations of a *Diatritaios* were very usual.

Velschius,
Obs. 5.

III. In a Latick Ague we must have a care of Purges, or they must be very gentle, and given with great caution: for the humour that is the cause of the Ague, is disperfed through the whole to the minime parts, after the manner of the natural moisture, the coction and separation whereof Nature regards not; but, because of its mixtion in minime parts with the natural humidity, she keeps it: Wherefore I have not known such persons cured either by Purging or Bleeding. Nay, if the Belly be loose, either of it self, or with Physick, they grow worse, and the good being evacuated with the bad, before separation be made, they dye, wherefore we must proceed rather with a good course of Diet, than with Medicines.

IV. In a Phlegmatick Ague, which the *Arabians* call *Latick*, or *Latent*, much of the innate heat is spent, therefore we must give food that nourishes much. The Body is troubled with a moistning and laxative humidity, from a cold and moist humour, but because of putrefaction turned hot and dry. Wherefore the body is affected with this Fever, as if some part were put in boiling water, wherefore some have called this the *Ebullient Ague*. The proper food for such as are taken with this disease, must be actually cold and dry, but potentially moist. And this is, that it may dry up the moistning humidity, and that it may restore the body, deprived of the innate moisture, and harden the lax members. Now this is difficult to find in a Simple, wherefore you must thus make a Sorbition; Boil a Pheasant, or Partridge, or a Kid (for these are the best of Flesh) with Roots and Rinds of Citron, and leaves of Artichoaks; boil them to a Broth, make a Sorbition with Bread. The Artichok removes the moistning and laxative humidity, hardens a lax part, and that without the wasting of the innate moisture; Besides, it opens and provokes Urine, and penetrates deep, which is required to the cure of this Fever, because the humour is disperfed to the minime parts of the body. Whence any one may reasonably gather, that a thick and plentifull Urine, and Sweat, are two remedies of this Ague. Nor must it be omitted, that above all Humorary Fevers, this Quotidian Ague requires a Diet, that may strengthen

Brudus de
vidua febr.
cit. l. 3. c.
10.

Febris Quotidiana Phlegmatica, or a Quotidian, or Phlegmatick Ague.

The Contents.

- The Cure must sometimes be amethodical. I.
Joined with a Catarrh cured in an old Man. II.
We must have a care how we Purge. III.
What Diet is proper? IV.
The efficacy of Garlick. V.
Whether Wine may be given? VI.
We must have a care the Body be not loose. VII.
Salt Fish is a proper food. VIII.

I. IN this Ague several intentions come under consideration; namely, we must endeavour all we can, that the Stomach may be discharged of the load of humours, the obstructions of the bowels opened, weaknesses strengthened, and, together with these things, that the dyscrasie of the blood may be amended, and the Ague-fits stop. Wherefore, because of such intentions as these we must go a long way to the Cure: Besides Vomits, Purges, Digestives, and Deobstruents, we must often give such things as restore the ferments of the blood and bowels, and correct their dyscrasies: Wherefore, fixt Salts of herbs, their extraets, acid mineral Spirits, and sometimes preparations of Steel, are very good. Concerning these means, there lies a different task, since, because of the manifold evil, many things must be done at once, yet because of the assiduity of the Ague-fit, the Patient has but time to use few of them. In these complicated distempers, though the form of method require us, first to remove impediments, and then to cure the Disease; yet I have known such an Ague in a cacochymick body, accompanied with several other illnesses, has been cured a methodically, and in an Empirical manner: That is, after a little provision for the whole, they first eased the Ague-fit, by applying febrifuges outwardly, that an opportunity might be taken of curing the rest better afterwards. I visited a Gentlewoman, who had long been of a cachectick habit of body, she was taken a month after her Lying-in, with a languid Quotidian-ague, after six or seven Fits, whereby she was brought so low, that she could not rise from her bed, nor take the least nourishment, but great trouble was created thereby to

Brudus de
vitiis febris
en. l. 3. c.
10.

Body much, after the manner of a Heſtick, to which it is very like.

Idem.

V. Nor muſt I paſs by in ſilence, that for them who are thus ſick, it is very good to boil Garlick, eſpecially for ſuch as are uſed to it, in their Meat and Broths: for it has a prerogative in ſtrengthening the natural faculties, and repairing the damages therein, which ariſe from the exceſs of two qualities, that is, cold and moiſture; moreover, it corrects the faults of the putrid humour, when it is diſperſed all the body over; it has alſo the faculty of driving from the centre to the circumference. Nevertheless, becauſe of its heat and acrimony, but little of it muſt be mixt with Broths, and it muſt be firſt ſteeped in Sorrel juice.

Idem.

VI. The proper drink for them is Whitewine, ſmall, deſecate and clear, of which take two parts, Pomegranate juice of a middle taſte, half of one part; Water, wherein freſh Maiden-hair has been boiled, one part. Mix them. But you muſt take care, that the Wine be very weak which you give them, otherwiſe it will doe them no ſmall harm.

Idem.

VII. We muſt take very great care that they be not looſe in their Bellies, but rather on the contrary, we muſt endeavour to make the Body coſtive, by things that open the pores of the Skin, and provoke Sweat.

Paulus Neu-
crantz de
Harrango.

VIII. *Trallianus*, lib. 12. cap. 17. in Quotidian Agues, when the Liver and mouth of the Stomach are cooled, and there is a Vomiting of Phlegm, approves of pickled things, and other hot things: for a cold and moiſt Stomach bears all extenuaters without harm. "I ventured, ſays he, once, to give a certain Man, who had every day a Fit of an Ague, and Vomited Phlegm, ſalt things, and the Fiſh pickled, which the Greeks call *ῥυζαῖοι*, alſo Brine, and Leek-pottage, and he grew wonderfull well. In which caſe, above all other ſalt meats, I ſhould give a pickled Herring, becauſe it is eaſie of concoction, and not grievous to a weak Stomach, and in goodneſs of juice, and gratefulneſs, comes behind none.

Febris Rheumatismi comes, or, A Fever attending a Rheumatism.

(See Rheumatismus, BOOK XV.)

The Description and Cure.

THIS Diſeaſe came moſt in Autumn, uſually upon this occaſion, ſcil. When the Patient had overheated himſelf by exerciſe, or any other way, and immediately took cold upon it. It begins the tragedy with a chilneſs and ſhaking, then immediately follow heat, reſtleſſneſs, thirſt, and all the other unhappy ſymptoms, which attend Fevers. After one or two days, (and ſometimes ſooner) the Patient is taken with a grievous pain in this or that Limb, eſpecially in the Wrists, Shoulders and Knees, which often ſhifts places, and takes them by turns, a little redneſs and ſwelling ſtill remaining in the part which it laſt ſeiſed. For a few of the firſt days, the Fever, and the recited Symptoms rarely concur: But the Fever inſenſibly vaniſhes, while the pain remains, yea, and is ſometimes more raging, becauſe the febrile matter is tranſlated to the limbs, which the Fever it ſelf ſufficiently argues, becauſe it often returns upon the repelling of the morbiſick matter, by unreaſonable application of externals. This Diſeaſe, when it is without a Fever, is often reckoned the Gout, though it be eſſentially diſtinguiſhed therefrom, as will eaſily appear to any Man, who perfectly knows both diſeaſes. If it be unſkilfully handled, it

often torments the wretched Man, not onely months; but ſeveral years, yea, all his life-time; though in this caſe it does not always ſeiſe him with the ſame vigour, but in certain paroxyſms periodically repeated, and now and then like the Gout. Yea, it may ſo happen, that when the ſaid pains have a long time grievouſly tormented a Man; they, at length, ceaſe of themſelves, and the Patient in the mean time may be deprived of all motion in his limbs till his dying day, the joints of his fingers being as it were turned in, and knotty protuberances, as in the Gout; ſhewing themſelves in the inſide rather than the outſide of the fingers, and nevertheleſs he may have a good ſtomach, and in all other reſpects be well in health.

There is alſo another ſort of this Diſeaſe, belonging to this place, which may very aptly be called a Rheumatick Lumbago, (of which BOOK X. iii. Lumbago.) becauſe both theſe ſorts of Diſeaſes ſeem to ariſe from Inflammation, which both the foreſaid *Phænomena* do argue, and eſpecially the colour of the blood, when it is ler, which is as like the blond of Pleuritick perſons, as an Egg is like an Egg; nor can any Man doubt, but theſe people labour of an Inflammation. The caſe ſtanding thus, I think the cure can be begun no other way but by bleeding, the blood in the mean time being tempered, and its exceſſive heat abated, as well by cooling and increaſſating Medicines, as by a convenient regimen.

And therefore I immediately order 10 ounces of blood to be taken from the Arm of the ſide affected, and I preſcribe a cooling, increaſſating Julep, to drink of it at pleaſure: For his pain, a Cataplaſm of the crum of Houſhold-bread and Milk tinged with Saffron, to be often renewed. But I forbid him Fleſh, and all broth of it. And I would have him riſe out of his Bed a few hours every day, becauſe the heat that comes from continual lying in bed, increaſes the Diſeaſe. The day following I take away as much blood, and two or three days after, according to the Patient's ſtrength, I take as much a third time, and then within four or five days (as the ſtrength, age, &c. of the Patient require) I bleed again the fourth, and uſually the laſt time: for it ſeldom happens, that we open a Vein above four times, except either a regiment, hotter than it ſhould be, have preceded, or hot Medicines have been given without any neceſſity. Nay, even Anodynes require plentifull blood-letting.

Wherefore, let the pain be never ſo cruel, through the whole courſe I religiously abſtain from Anodynes, becauſe by uſing them the Diſeaſe is fixt, and does not ſo eaſily give way to bleeding, which muſt for that very reaſon be the oftner celebrated, becauſe theſe Medicines have been too officiouſly given. And what if in the ſtate of the Diſeaſe they are not able to give that eaſe, which they pretend to? In the mean time, on thoſe days he does not bleed, I order a Clyſter now and then to be given him, and I earneſtly exhort them to take care, he have one given him every day, for eight days at leaſt, after his laſt bleeding; after which time I order him to take a gentle Purging Potion of Lenitives, and the evening following a pretty large doſe of *Syrupus de Meconio* in Cowſlip-flower-water, to the end the commotion of the blood, which might endanger a relapſe, may wholly be reſreſſed.

We muſt take notice, it is not ſo adviſable, when the Rheumatism has been ſettled for ſome years, to let blood at ſhort intervals, as at the beginning of it; but it is better to determine theſe repeated venaeſections at the diſtance of ſome weeks, which at length will either carry off the whole matter, or will doe it ſo far, as that by making an Iſſue in each Leg, and taking ſome of Dr. Goddard's drops in Canary-wine morning and evening, the remainders of it will be extirpated.

Febris Scarlatina, or, A Scarlet Fever.

Its Description and Cure.

ALthough a Scarlet Fever may come at any time, yet it usually comes towards the latter end of Summer, at which time indeed it takes whole Families, but Children especially. They are at first chill, and shake, as in other Fevers; but they that are taken with this, are not very sick; afterwards their Skin all over is beset with little red spots, much thicker and broader, and far redder, than in the Measles, but not so uniform. These Spots remain for two or three days, which at length vanishing, and the Cuticle underneath parting, there remains a branny Scurf, as if Meal had been strewn on the Body, which comes and goes off again twice or thrice.

Because this Disease seems to me nothing but a little effervescence of the blood, caused by the heat of the preceding Summer, or some such way, I do nothing at all to hinder the blood from despumating and discharging the peccant matter by the Pores of the Skin, which is ready at hand. Wherefore both on the one hand abstaining from Bleeding and Blisters (by which sort of Remedies, Revulsion being made, I suppose, the Particles annoying the Blood would be more intimately mixt with it, and the motion most congruous to Nature would be checkt) and on the other hand from giving of Cordials, by whose Heat perhaps the Blood would more impetuously be disturbed, than the gentle separation requires, which it is then wholly upon (and why may not a more violent Fever be kindled with this Tinder?) I reckon it sufficient, to keep the Patient wholly from Meat, and from all spirituous Liquours whatever; and that he neither go abroad nor lye always in bed. When the Skin is skaled off, and the Symptoms ceased, I reckon it good to purge the Patient with some gentle Purge, accommodate to his age and strength. By this simple and plainly natural method this name of a Disease (for it scarce amounts to more) is easily removed without trouble or any danger: Whereas on the contrary, if we trouble the Patients, by imprisoning them continually in bed, or by excessive giving of Cordials, or other unnecessary Medicines, over learnedly, and (as they say) *secundum artem*, the Disease is presently encreased, and the Patient oftentimes for no other reason, but his Physician's over-diligence, goes to the greater Number.

Sydenham.

Febris Syncopalis, or, A Swooning Fever.

The Contents.

When it comes of Humours, Sometimes Blood may be let. I.

Whether a Vomit may be given? II.

Whether we may purge? III.

Its Nature and Cure. IV.

I. **A**Lthough Galen, 12. Meth. 3. be utterly against Bleeding, because it cannot be done without great loss of strength, being content onely with that evacuation, which is made by friction; Yet Trallianus, who is backed by Rhases and Averroes, advises Bleeding, that is, where the humour is half concocted, and abounds with store of blood. But if the humours be of another nature, if they be cold and crude, if the Winter, Constitution, Clime and Age be cold, and if the Blood be little and good, Bleeding would doe harm; be-

cause so the Patient is filled with crude and cold humours, according to Avicenna, 4. 1. c. 20. And this place of Galen's must be understood of extreme Crudity: for, in another, de S. M. c. 12. it appears, we may bleed, where the humours are not very crude. "Where, saith he, there is need of much evacuation, but the strength is low, in such we must part evacuation, as you saw me doe in them who had abundance of crude juices: for, when a little Blood is taken away, I presently give Melicrate well boiled, with some inciding Medicine, and so I let blood again, either the same day, or sometimes the next, then I give some of the aforesaid Medicines again, and take away a little blood again, and so again on the third day, as I did before". For as Fire is choaked with heaping up a great deal of green Wood upon it, unless part of it be removed, which when taken away, the Flame breaks out, so we must judge the same of our innate heat, which languishes with a mass of crudities, unless the superfluous load of humours be disburthened by means of Blood-letting.

II. Evacuation of the humour contained in the Stomach by Vomit may be attempted, but with gentle Medicines, according to Galen, 1. ad Glauco. 14. by giving fresh Oil of sweet Almonds to 8 ounces, to which, to make it stronger, I would add 2 ounces of Juice of Citron or Lemon: And to make him vomit the more easily, according to Galen, by heating the hands, feet, and the mouth of the stomach. Yet here Galen causes a doubt, who, l. c. in the beginning forbids evacuating Medicines, before the Stomach be strengthened. Again, afterwards he writes, that they who faint because of ill humours at the mouth of the Stomach, must be made to vomit with Water and Oil, and he makes no mention of strengthening the Stomach. I answer, that he supposes the fretting humours in the cavity of the Stomach, not fixt in the Coats. 2. When he writes, that the Stomach must first be strengthened before evacuation, we must understand it of some great evacuation which is made by Bleeding or Arong Physick, not by gentle things, and then he strengthens the Stomach inwardly and outwardly.

R. a Fonseca,
Conf. 20.
Tom. 2.

III. Galen in the Cure of this Fever abstains from all evacuation, and onely procures coction and attenuation of the humours, partly by revulsion with frictions, which also attenuate and evacuate, after which he anoints with Oil of Aniseeds, for dissolution: Nor does he attempt any sensible evacuation, unless sometimes by a Clyster, or giving crude Mulla and Oxytel with Hyssop, and he gives nothing else till the seventh day, because where there is crude phlegm, Fasting is easily born. Hippocrates confirms this Cure, who in anxious Fevers, where the Patient can get no rest, and the extreme parts are cold, gives nothing else but aqueous Oxytel, nor does he use any Sorbition till the declension. On the contrary, the Arabians, Trallianus and his Followers reprehend the aforesaid Cure, because Friction is but a slight and long Remedy: and the Patient cannot subsist with such a thin Diet to the end of the Disease. Wherefore they judge, it is better to evacuate the matter by little and little with gentle Medicines, not known in Galen's time. Besides, a little fuller Diet must be allowed of Juice of Ptisan, with Pepper and a little Honey: nor must Wine be forbid, to prevent and cure the Swooning. For a Decision we must say that Galen's Cure is safer, who does not evacuate but by Clyster, for by taking a Purge, though but a gentle one, the Patient may dye upon disturbing the humour, and so he may be guilty of his own death. And when Clysters are given, the Patient must not rise from his bed, lest a Swooning be caused, and they must be given in the declension of the Paroxysm, and must not be sharp. But if any thing must be given by the Mouth, it must not be by Physick, but by Mulla, Oxytel, and Ptisan mixt with Honey. Arculanus, a Man of great Learning

Learning and Experience, approves of this Cure, who says, that all his life time he saw onely four such cases: I. In an old Woman, who had a Purge given her, and she was cast into so violent a Swoon, that she was almost dead, and the fourth day she died. The other three were young People, one of which was troubled with a Loosness and frequent Swooning, with great Faintness, who yet was saved. Another sweat, and was cured thereby at length. In the fourth he onely proceeded with Clysters and Frictions, and afterwards, when the Swooning ceased, a Purge was given, and he escaped. Therefore, says *Arculanus*, as long as the Swooning lasts, we must proceed with Clysters, which when it wholly ceases, some gentle Purge must be given. ¶ In this Affair of the greatest moment we must go cautiously to work; for if the Swooning last the whole Fit, it is impossible to give a solutive Medicine, be it what it will; because affliction must not be added to the Stomach, that is perpetually afflicted, otherwise stomachical Swoonings become irrevocable and mortal, as *Galen*, §. de loc. aff. 6. has observed. But if in the declension of the Fit the Swooning cease, as it most frequently happens, the Stomach being first strengthened, some minoration of the crude matter must be procured first by Clysters, and then by Vomiting, if the Patient be inclined to vomit. In the mean time Attenuants and Concocters may be given, that a gentle Purge may be given afterwards, if not on the fourth day, at least a little after. But such Fevers as these require an experienced, or at least a very cautious Physician.

IV. Sometimes Swooning Fevers occur, which have their name from Swooning, which seizes the Patient together with the Fever. They are owing to the pancreatick Juice, but such as by its stagnation has acquired a volatile rather than a sharp Acidity, there being in the mean time but little Bile or very sluggish: wherefore without delay it penetrating the Heart by the lacteal Veins, does not onely break out every way and cause a cold Sweat, but it also immediately so coagulates the Blood, that sensibly for a time it does not pass, and therefore no Pulse can be observed till the accession of this exceeding nocent Juice ceasing, the Bile begins by degrees to prevail, and the Patient seems as if he were risen from the dead. That the Swooning may be prevented, I commend this Mixture to be taken by one spoonfull at short intervals. Take of Mint-water 2 ounces, *Aqua vite Matthioli* 1 ounce; or, Take of Tincture of Cinnamon half an ounce, Oil of Cloves 6 drops, Syrup of Scurvy-grass 1 ounce: Let it be given a few hours before the Fit.

Febris Symptomatica, or, A Symptomatical Fever.

The Contents.

Many Fevers that are reckoned Symptomatical, are essential. I. A vernal Symptomatical from an occult Inflammation of the Thoracick parts, II.

I. **W**E must take good notice (which is of great moment in practice, and is observed but by few) that all Fevers are not perpetually Symptomatical, which are joined with Inflammation of the parts, but some of them are essential, to which the foresaid Inflammations use to succeed: For it usually happens, that after the Blood, corrupt or full of bad humours, has caused a Fever, it is disturbed by Nature, and, as hurtfull to it self, is expelled to the weaker parts, or such as are fit to receive the humour, whereby an Inflammation is produced in them, which does

not cause the Fever, but is rather succedaneous to it. Thus we may frequently observe in our practice, that in the beginning People are sick for a day or two, before a Pain of the side and other signs of a Pleurisie appear: Thus many on the third or fourth day fall into a Phrenzy; thus all Arthriticks almost, before they are taken with a pain, swelling and inflammation in their Limbs, use to be ill for a day or two of a continual Fever: Thus they that are taken with an *Erisipelas*, have a Fever for some while, before it appears. The disposition of the Urine shews as much, which in such Inflammations manifestly bewrays marks of putrefaction contained in the Veins: for at the beginning it appears crude, but in process of time it shews signs of Coction daily increasing. Very corrupt Blood also is taken out of the Veins, which things would not be, if such Fevers were onely Symptomatical, or simply depending on those Inflammations.

II. In the Spring-time, especially towards the latter end of Spring and the beginning of Summer, a sort of Fever uses to invade at that time, which although it want the pathognomick signs of a Pleurisie or a Peripneumony, yet it is as a Symptome, in respect of some Inflammation lurking about the spirital parts, for there is no pain of the side, no great difficulty of breathing: wherefore suspecting it to be a bare Fever, I sometimes inclined to treat my Patients in the same method as I used to doe in curing Fevers. Nevertheless, afterwards I reckoned with my self, that this season of the year was unfit for producing Fevers which run into continuity; for of themselves, they do as it were part into pieces, and place themselves among the intermittent kind, or they turn to Pleurisies and such sort of Inflammations; moreover also I took diligent notice of the Blood that was let in this sort of Fevers, and it looked just like the Blood of Pleuriticks, I also observed a redness in the Cheeks, and a certain propensity to bleed at the Nose, though a Vein had been opened before; besides, I found a little cough, and some obscure pains in the vital parts sometimes. These things therefore well considered, I was at length persuaded, that I must proceed in the same method in this case, as I had often used in the Pleurisie with singular success, and it happily succeeded, as I desired.

Febris Synochus Putris, or, A Putrid Continent Fever.

The Contents.

The Fever must presently be suppressed. I.
The heating of the Blood must be prevented. II.
Nature's motion about the Crisis must be attended. III.
How we must prevent the Symptoms? IV.
What Diet in the Declension of the Fever? V.
When the Crisis is imperfect, what must be done? VI.
When the case is desperate, the Patient must not be given over. VII.
The Diet must not be too thin. VIII.

I. **W**E must endeavour to suppress the Fever immediately at the first coming, and to stop the Inflammation of the heated Sulphur, to which Venæsection especially conduces; for by this means the Blood is eventilated, and the hot particles overmuch agglomerated, and then next to burning are dissipated one from another, just as Hay, that is apt to take fire, if it be exposed to the open Air, its burning is hindered. Moreover a spare Diet must be insisted on, in which nothing spirituous or sulphureous must be used. Let the Bowels and first ways be rid of the load of excrementitious matter, wherefore Clysters will be of use, and sometimes

R. Fonseca,
Conf. 19.
Tom. 1.

Fortis.

Sylvius de
l. B. E.

Willis, de
Febr. c. 11.

times Vomits and gentle Purges, by which sometimes seasonably used and with judgment, the Fever is extinguished at the very beginning, when the Fewel is withdrawn: But if, notwithstanding this method, the burning spread farther, and take the sulphureous particles of the blood more and more every day, let care be taken (as much as can be) that the deflagration proceed without much disturbance.

II. Wherefore, when the Fever is in the increase, if the blood be too effervescent, and distend the Vessels much, with a strong and vehement Pulse, if Want of sleep, Phrenzy, or the Head-ach be very violent, let Bleeding be repeated again, and free transpiration (as much as may be) procured: Wherefore let the Patient keep himself for the most part in bed; let his Diet be spare, of very thin aliment: Also let his Drink be small and plentiful, that the boiling blood may be diluted with a more copious Serum. Clysters are safe and convenient enough. But let Purgatives and Diaphoreticks, and things that disturb the blood much, be as industriously avoided as the blowing of the Wind, when a House is on Fire: But Opiates and Anodynes, that fix and thicken the blood and spirits, must rather be used. Also Juleps and Decoctions, which cool the raging Bowels, temper the Blood, and refresh the Spirits, must be made use of frequently; Acetous Liquours of Vegetables or Minerals, and purified Nitre, because they restrain the raging of the Blood, and quench thirst, are very proper: Let hot and spirituous Waters, cordial and bezoartick Powders (as long as the Disease has no malignity) be avoided. If the blood circulate unevenly, and be carried more impetuously towards the head than the feet, Epithems of the warm flesh or bowels of Animals applied to the Soles of the feet are good.

Idem.

III. When the Fever is in the State, Nature's motion must be carefully attended, whether she will make a Crisis or no. Wherefore nothing must be attempted rashly by the Physician; Bleeding and Purging must be avoided, but when the febrile heat is somewhat abated, after the deflagration of the blood, and signs of coction appear in the urine, if then Nature's motion be too slow, a Sweat, or a gentle Purge may be given. But if all be crude and disturbed, if the urine be still turbid, without a sediment, or secretion of parts, if the Spirits be languid, the Pulse low, if no Crisis, or only what was provoked, precede, no evacuation whatever, either by Sweat or Purge, can be attempted, without manifest danger to life: But we must tarry longer, that the spirits of the blood may recover themselves, may in some measure concoct the excrementitious and crude humours, and then separate them a little. Then let the Spirits be refreshed with moderate Cordials, let the immoderate effervescence of the blood (if there be any) be hindered and its due fermentation sustained, which truly is best performed by Coral, Pearl, and such Powders, for indeed they are dissolved by the ferments of the Bowels, and then ferment with the Blood, and very much restore its weak and wavering motion. In the mean while (Nature labouring) let all obstacles and impediments be removed; and especially the increase of excrements gathered in the first ways must be abated with the frequent use of Clysters.

Idem.

IV. In what manner or method the most urgent Symptoms ought to be treated, it will not be easy to prescribe by certain rules, because the self same must sometime be immediately stopt and quieted, sometime more hastily promoted; and, which is more than all, it may be, at another time they must wholly be left to nature. We must oppose some of them with assuaging and lenient Remedies, and others with rougher and irritative Physick. Yet in the mean time this Rule must be observed in all of them, that we religiously insist in Nature's foot-

steps, who, if she doe amiss, her disorders must be reduced. If she go right, but too violently, she must be restrained; but if she go right, and operate slower or weaker than she ought, it would doe well to promote and aid her endeavours by the help of Physick.

Idem.

V. In the declension of the Fever, when, after the Crisis is over, Nature is above the Disease, all is safe, and there is not much for the Physician to doe, it only remains for him to propound an exact course of Diet, that the Patient may quickly recover his strength without any fear of a Relapse. It is also good to carry off the reliques of the febrile matter by a gentle Purge. In Diet, Men oftneft split upon the Rock of a Relapse, that is, the Sick, after preposterous eating of Flesh or strong Meat, relapse into a Fever; for when the Bowels are weak, and they do not easily concoct aliment (unless it be very thin,) and when the Crisis of the blood is so weak, that it cannot assimilate a strong nutritious Juice, if any thing disproportionate be offered to either of them, the œconomy of Nature is perverted, and all goes to wrack. Wherefore Convalescents must long abstain from Flesh, and must not eat it, till after their Urine be like healthy persons, and does no more grow turbid in the Cold; and then indeed it is best to begin with a dilute Meat-broth, and after gradually to ascend to stronger things.

Idem.

VI. When after an imperfect Crisis the case is doubtful, and the controversie under decision, then a difficult task is incumbent on the Physician. Let Nature's motion and strength be diligently attended, whether she begins to prevail upon the Disease, or to yield to it. If there be signs of Concoction, and strength be good, a gentle evacuation may be made. In the mean time we must help the most urgent Symptoms with proper Remedies, all impediments must be removed, and strength must be restored (as much as may be) by Cordials and a right course of Diet.

VII. When after a bad Crisis, or none at all, all things grow worse, and when the Physician almost despairs of the Cure of the Disease, let him give the prognostick, that the event is doubtful, and much to be feared: Yet he must not so far rely on the prognostick, as to let his fears too much possess him, but still let him provide, as much as lies in Physick's skill, for the health of his Patient, though despaired of, let Remedies be used for the most troublesome Symptoms, and let the Spirits of the blood almost extinct be recruited by Cordials. When we despair of Recovery, let life be prolonged as long as we can, and an Euthanasia at least procured.

Idem.

VIII. In Continent Fevers (because they are always accompanied with great strength) we may give a thin Diet; But after Putrefaction is begun, we must feed the Patient higher, because the Corruption of the humours requires it, according to Galen's opinion, lib. 8. Meth. and 1. Aphor. 17.

Mercatus.

Febris Tertianæ, or, A Tertian Ague.

The Contents.

- Whether Blood may be let? I.
The time to let blood. II.
Whether a Purge may be given onely after the third Fit? III, IV.
At what hour a Purge, must be given in a double Tertian? V.
Syrup of Damask-roses not fit to purge withall. VI.
An exquisite Tertian curable by alteration alone without purging. VII.
Sometimes it onely gives way to a Vomit. VIII.

Whether

Whether it may not be cured without one? IX.

A Vomit is seldom proper for a legitimate one. X.

The efficacy of Spirit of Sulphur. XI.

A bastard Tertian cured by the use of Spaw-waters. XII.

Made longer by the abuse of cooling Juleps. XIII.

The excessive use of Aperients hurtfull. XIV.

Drinking of Water good for an exquisite one. XV.

The remainings ferment must be extinguished by Specificks. XVI.

We must have regard to the indisposition of the Bowels. XVII.

What way a Decoction of Wormwood does good? XVIII.

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A caution in the application of Epithemes. XXI.

Applications to the Wrists not to be rejected. XXII.

The Diet must be thin and spare. XXIII.

The Patient sometimes killed with a multitude of clothes. XXIV.

The Cure of a long one. XXV.

How many hours before the Fit Meat must be given? XXVI.

A proper Food of Bread. XXVII.

Whether Lentils may be given? XXVIII.

Whether Eating of Flesh may be allowed? XXIX.

Whether a Tertian or a Quotidian require a grosser Diet? XXX.

I. **Galen** makes no mention of Bleeding in the Cure of a Tertian, *primo ad Glauconem*, nor his Followers, *Paulus* and *Ætius*. Onely *Altiarius* among the Greeks, *l. 3. c. 19.* allows it. "In all Fevers, saith he, it is convenient to let blood, for since, after the spirits, it first of all takes heat, and affects the whole body, if any of it run out, much heat goes out with it. And though it be caused by yellow choler, yet blood which is easily inflamed, affords matter to it, and because it goes over the whole body, it heats it. Wherefore if any of it be evacuated, a great share of the Fever is also spent: For if People in Fevers find benefit from insensible Transpiration, and if it be evident, that the Fever grows higher, when the Skin is stop'd, would it not be better for the Patients, if a sensible evacuation of the humour were made, that distributes the Fever into the body? Blood therefore must be let twice or thrice, and sometimes to fainting."

II. The Arabians, according to *Avicenna*, do not breathe a Vein before the third Fit, which seems rather to rely on experience than reason: Since Bleeding, according to *Galen's* Rules, should always be celebrated in the beginning, when it can be done. For seeing this Ague is terminated in seven fits, after the third fit the State is either present or at hand, at which time, according to *Hippocrates*, nothing is to be moved. Therefore, if the Veins be turgid with much blood, it must be let presently. But if there be no abundance of blood, *Avicenna's* advice must be followed, which I have very often found true by experience: Now *Avicenna* advises, if it be possible, to let blood before the fourth fit; if it be possible that you can let blood after three fits, doe it, saith he. Where we must take notice of what *Gentilis* observes, and it is most true, That an exquisite Tertian begins with a bilious humour, which is not mixt with the blood; but afterwards, in the following fits, it uses to vitiate the blood, and there Bleeding is not necessary in the first fits, but onely in the following, which will be known, if the Urine be first citrine and yellow, and afterwards tend to redness. If therefore blood be let after the third fit, because the fourth is next, which is the state of the Disease, and therefore will be the most violent of all, it must, according to the advice of *Gainerius*, *Gentilis*, and others of the Arabians, be foretold, lest the blame of the violence of the Disease be imputed to the Physician. We must have a care in Tertians, that at the first coming, or immediately after the first fit, we let not blood, for the blood then differs nothing from what is sound; and Bleeding must again be repeated, when the hot intemperature is spread over the whole Mass of blood, which will not fall out ve-

ry conveniently for such as are not plethorick, or are but weakly. This was observed in a Tertian Ague, which a few years ago raged in our City, that the blood which was let at the beginning, looked like that of healthy mens, with no benefit to the sick; but when it was let after the second or third fit, it did good.

III. If a Tertian Ague take a Man, if indeed three fits not omitted, the fourth seize him, give him a Medicine to drink that purges downwards. *Hippocr. 2. de morb. sect. 2. v. 194.* But *lib. de Affection.* he gives a Purge in the fourth fit, which falls upon the seventh day. He expresses the reason of the difference in these words, If indeed he seem to you not to be purged, give a Purge on the fourth day: But if he shall seem not to want a Purge, &c. Wherefore the way of purging in a Tertian Ague will be this, If one full of many humours fall into a Tertian, he must be purged the fourth day; for there would be danger, by reason of abundance of humours, that the Ague might turn to a continual, acute Fever: But if not, purging in the beginning is not necessary; for, as *Hippocrates* said in the forecited place, If in the beginning of the Ague you give a Purge, after he is purged, the Ague returns, and you have again occasion for a Purge. We must tarry therefore till the height of the Disease be over, which in a Tertian Ague, that exceeds not the seventh fit, falls at farthest in the fourth fit.

IV. Although *Hippocrates, l. de Aff.* give a Purge, when onely the third fit is over, to whom also *Celsus* subscribes, yet these great Men onely used it, when some Coction had preceded, because they knew not our gentle Purges: whereby even in the beginning sometimes we carry off abundance of bilious humours with great benefit, when they are thin, and very ready for purging. But we must not therefore give a Purge at the very first, as *Rhases* does erroneously, whom *Avicenna* reprehends. And though *Galen* seems to affirm that thin humours may be carried off by a Purge, yet he means thin, serous and watry humours. For we dare not give a Purge after the third fit, unless manifest signs of Concoction appear, and then we use an Infusion of Rheubarb, with Syrup of Roses solutive, drinking some quarts of Whey of Goats-milk or Barley-water.

V. In a double Tertian it is difficult to chuse the hour for to give a Purge, because often times there are onely three or four hours between the fits, and sometimes one comes before the other is off. The most convenient hour to give them, must be chosen thus, that the Purge may not be given when the new fit comes, but when the first ends, at that distance from the following fit, that before it comes, the operation of the Medicine may be over. But in a subintrant (that is, when one fit comes before the other is off) in the beginning of the declension, as soon as ever it begins to abate a little. And in both cases some Broth must be given three hours after taking of the Physick: yet so as that there may be three hours more after the taking of the Broth, before the next fit come. And so the Physick must be given six hours before the next fit.

VI. Syrup of Damask-roses, although it be gentle and gratefull, yet because it purges onely serous excrements, it can have no place in bilious Fevers, unless the Patient abound with serous humours, otherwise the Serum being voided (which bridleth Choler) thirst, heat and drought are enraged.

VII. In an exquisite Tertian, a *Causus* and other raging Fevers, many, without any other consideration, give things that purge Choler, according to *Hippocrates* his Rule, *l. de Purgant.* Give to bilious persons things that purge bile; and to phlegmatick persons things that purge phlegm. But all bilious Diseases must not be treated with Purgatives, because many give way to Alteratives and other Medicines: For *Galen, 2. de Cris.* says, that Bile is violently moved in Tertians, and disseminated through all the parts of the body

Bartholinus,
Cent. 6.
Hist. 42.

Prosop. Mar-
tianus.

Fortis, cap.
de Tertianis
exquisitis

Riverius.

Enchirid.
Med. Prae.

body, and that it purges its self by the violence of its motion: Therefore we should not be so solicitous about the indication of evacuating, as of altering. And in such persons Hippocrates requires Gripping of the Belly and other signs, to adventure on purging: for, 3. de Morb. he says, *But if the mouth of the stomach be not affected, but the griping go down to the belly, give Physick that purges downwards.*

Mercatus.

VIII. The filthy humours contained in the Stomach, Mesentery, and hollow of the Liver, use to produce this sort of Agues, which is brought up sometimes by one Vomit, when it could not be carried off by many Purges, as *Fernelius* observes: And therefore if the Patient be troubled with Vomiting at the beginning of the fit, the Physician would doe well to follow the motion of Nature. Chymists ascend to *Aqua benedicta*, which as it happily evacuates the matter that is lodged in the first ways, so it requires a prudent Physician, who must see that there be no contumacious obstructions in the Bowels.

Rivierus.

IX. An opinion has prevailed among the Vulgar, that a Tertian ague can scarce be cured without a Vomit, wherefore some Medicafters use, under the pretext of necessity, to give a Vomit to all that are sick of this Disease (though they be weak and infirm, not without great peril of their lives) and such as they think unable to bear this Remedy, they leave to Nature. But (as to my own experience it has often sufficiently appeared on the contrary) this is an erroneous practice. And I rather think that, unless in a strong body and inclined to vomit, and when it happens that the Stomach is loaded with excrementitious matter, a Vomit is rarely or never required, but instead thereof a gentle Purge, whereby the humours are kindly carried off, will be of more use; for purging in this case does the same that vomiting, namely, it evacuates the cholechoal Vessels, that Bile being plentifully drawn out of the Blood, the febrile Dyfcrafie may be amended. But when the felleous humour, being pumped up into the Stomach, is voided upwards, great harm is done thereby to the Stomach, and a notable disturbance made in the whole Body; whereas, if the humour be carried downwards by a gentle Purge, it is voided without any trouble.

Willis, de Febr.

X. The facility of the matter to be carried off, and the inclination of Nature must immediately be considered: For if the matter putrefie about the *Viscera naturalia*, it must be carried off by vomit or stool; if in the ambit of the body, by sweat: But so mordacious a matter must never be carried off by vomit, because of the exquisite sense of the Stomach, unless when Nature tends that way, to wit, that it may the sooner be got out of the Stomach; and then we must use warm water; or an epicerastick Vomit may be made of Chicken-broth, altered with Malloes, adding Oil of sweet Almonds and *Julapium Acetosum*, letting alone antimonial and strong Vomits, proposed by Chymists and admitted by *Sennertus*.

Fortis.

XI. It appears to me from several experiments, that Tertian agues have been cured with Spirit of Sulphur and Water, given in the height of the fit and in extreme thirst, whereby plentiful sweat was procured, after which not onely the fit was stopt, but the Disease was perfectly cured. In a less quantity of Water, the quantity of the Spirit must be lessened, lest it be too sowe.

Rivierus.

XII. A Nobleman 25 years old fell into a bastard Tertian in Spring time, when May came on, he desired to drink *Schalwack*-waters, wherefore he went thither, evacuation premised, on his intermittent day; the next day he endured the fit for two hours in bed, when he was thirsty at length, he drank one pound and a half of the Waters by degrees, to quench his thirst, and then being well covered he began to sweat, and quickly the fit ended in a total

intermission. After, by continuing the use of Waters, and gradually ascending to a larger Dose, he once or twice perceived a little of his Ague at the time of the fit; and then he always provoked sweat by taking a convenient potion of the Waters, as his Ague declined, by which means, without using any other Remedies, the Ague totally intermitted, his languishing strength returned, and his former health was restored.

Horstius, l. 1. obs. 12.

XIII. They that have written of the Cure of Fevers, do prescribe in Tertians and other intermittent fevers (or agues) cooling and moistning Juleps, as if Coolers were of use in Agues at all times: For, on the contrary, they are often a cause of the Continuance and Contumacy of Agues, that is, when they are used after the seventh fit, the heat of the humour being repressed: because they fix the humour more, and weaken the innate heat, which is the onely cause of the concoction of the humours. When therefore it is grown old, the Constitution of the Bowels must be taken notice of from the face and habit of the whole Body. He that is of a firm habit of body, and has a vegete heat, does a long time bear the use of Coolers and Moistners without harm, and is helped thereby, if his Liver be hot and dry, and the humours be sharp and raging: But, on the contrary, if the innate heat be languid, and the humours be pituitous and melancholick, the Fever will be protracted a long time by too cooling and moist things. We must therefore distinguish in what Agues heat and thirst require to be quenched by Coolers and Moistners, and in what, to be wasted by an attenuating Diet, and by abstinence from Drink. Crude and gross humours, by a thin Diet, abstinence from Drink, and the use of Concofters, being conquered by the innate heat, are easily dispersed and vanish, or turn into the nutriment of the Body. But hot and sharp humours require to be asswaged by cooling and moistning things; yet so as neither violence may be offered to the bowels, nor to the innate heat.

Enchirid. Med. Præd.

XIV. Every morning I would give some clarified Juice of Plantain, with one ounce of Wine, not strong, but weak. For so not onely respect will be had to apertion, but strength will be added to the natural parts. How much the Stomach and Liver are spoiled by Aperients onely, if the use of them be continued too much, Experience abundantly testifies.

Ab. Seyller, Epist. 4. apud Schotzium.

XV. Drinking of Water is very good for Tertians, because it properly extinguishes the burning of Choler, if there be the Conditions which *Galen*, 9. & 11. *Metb.* and in other places, requires: But he forbids the giving of it before signs of Coction, because it hinders attenuation and digestion of tough humours, and causes difficulty of breathing, convulsion and trembling in some. But *Averroës* tarries not till that time, because the Patient in the mean time is in danger of having his innate heat extinguished by the febrile: and because the damage done by the cold Water is less than what would be done by the burning Heat: for by drinking cold Water there is onely danger of lengthning the Disease; by the violent Heat, of Death. Besides, Coction is a sign the Disease is overcome, and when the Heat is quenched, drinking of Water is useless: Therefore when Bile is raging, cold Water may safely be given. When it is cooled, and the state of the Disease is over, it will be useless, because the humours will grow crude again with the Water, and new occasion will be given to Obstructions, and lengthning out of the Fever, especially in Natures that are obnoxious to Obstructions, as the melancholick.

XVI. Because in the place of Putrefaction, in long Fevers, a certain Infection, like to a Ferment, is usually bred and left behind, whereby the humours, though not so very bad, are fermented and corrupted: Therefore to extinguish this ferment,

ment, and stop the humours, convenient Evacu-
tions premised, we may proceed to the use of the
Peruvian Bark, which must be given in the begin-
ning of the fit with Malmsey Wine, in manner and
quantity as is well known to all Physicians.

Fortis.

XVII. A Tertian ague is sometimes prolonged by
a hot and dry intemperature of the Liver, which
continually produces fewel for new fits. As I have
often observed in several, who were of a dry and
squalid habit of Body, and altogether cholerick,
and without any store of humours, they have had
a Tertian for three or four months, especially in a
hot season of the Year. Violent Purgatives, and
violent Aperients and Heaters are hurtfull to such:
But they must be treated with a cooling and moist-
ning Diet, and with Juleps and Broths of the same
quality: And the superfluous humours must be pur-
ged away by degrees with emollient and cooling
Clysters, *Cassa*, Tamarinds, *Catholicon*, and Syrup of
Roses, but in this case Baths of sweet water espe-
cially doe wonders, by extinguishing the hot and
dry intemperature impressed on the Bowels, which
the Patient may use without Sweating. Sometimes
also the length of a Tertian depends upon an indis-
position of some part, especially of the Liver or
Mesentery, which cannot be cured by Purgings ne-
ver so often repeated, because the ill quality re-
mains in the part, and daily gathers new humour,
which maintains the fits: And this ill quality is
removed by Diureticks, Sudorificks, and other dis-
solvents. Things endued with such qualities are,
Wormwood, lesser Centaury, *Carduus benedictus*, root
of Dittany, Burnet, Tormentil, &c. whereof deco-
ctions may be made, to be given several days be-
fore the fits.

Enchir. Med.
pract. &
Niverius.

XVIII. Many are ignorant what *Galen's* skill was
in giving of Wormwood in Tertian agues. In cu-
ring of them, this among many other is one Indica-
tion, to purge store of bilious humour by stool and
Urine: Another is, to strengthen the mouth of the
Stomach, much molested with bile. Wormwood
performs these things, of which *Galen* 6. simpl.
"Wormwood has an astringent and bitter, and also
"a sharp quality, both heating and cleansing, and
"drying and strengthening. Therefore it drives
"down the bilious humours of the Belly by stool,
"and purges by Urine: But it purges what is
"bilious in the Veins, most by Urine; therefore
"it does no good, when it is given for Phlegm con-
"tained in the belly. And *Dioscorides* lib. 3. cap. 23.
"It has an astringent and heating virtue, it purges
"bile which sticks to the Stomach and Belly, it pro-
"vokes Urine. Therefore Wormwood is given for
these two Reasons, to purge Bile, and to strengthen
the Stomach. It does no hurt because hot: for its
substance is not given, but its decoction or infusion
in Melicrate, as *Galen* said; besides, onely the leaves
are infused; that is, a small quantity to cause heat:
To say nothing, that if it doe a little harm, it need
not be valued in respect of the good it does. They
doe amiss who give the juice.

Augenius,
l. 7. tom. 1.
Epist. 8.

XIX. A Woman 45 Years old, after a disorder-
ly Diet, was taken in the latter end of May with a
Tertian ague. I neglecting the Ague, betook my
self to restrain the fierceness of the sharp Salt re-
dounding in the Patient, and not without success;
for when I had given her of the volatile Salt of Harts-
horn half a scruple, with 6 grains of Salt of *Carduus
benedictus*, and 5 grains of Salt of Wormwood, but
the first time, and that one hour before the fit, it
not onely came later by two hours, but held her
much more mildly. Wherefore insuing on this Me-
dicine, and when because of its nauseous taste she
began to loath it, I made it into Pills with a little
crum of Bread, and I cured her.

Georgius So-
gerus, Misc.
Cur. an. 72.
Obs. 244.

XX. A Gentlewoman was taken with an exqui-
site Tertian ague, she obstinately refused all that I
prescribed, in the mean time the Disease grew
worse, and for eight fits it grew stronger and

stronger every fit. I visited her a little before
her ninth fit, and when she refused to take
any thing inwardly, I order bottles filled with
hot water to be placed here and there about her,
to make her sweat against her Will. She on the
contrary commands the bottles to be taken away,
I being not at all moved with the clamour of my
Patient, order the Maids to observe my commands,
and to force her to sweat against her Will, remem-
bring that of *Hippocrates* 2 Epid. We must endeavour
that anger may be provoked in such as are pale.
Now (said I to my self) if anger must be provoked,
that the blood may be diffused through the habit
of the body, and dispell paleness, perhaps it may also
drive out the Ague, and open the inward obstruc-
tions, the cause of the present mischief. Nor did
my Augury deceive me, the Ague ceased forth-
with, and though she was outrageous angry, it
stopt, and never returned any more.

Borrichius,
Misc. Cure
ann. 72.
Obs. 234.

XXI. In the height of the fit, to allay the heat,
cooling Epithemes of water of Cichory, Roses,
Plantain, Vinegar of Roses, &c. may be applied
to the Liver. Yet we must have a care, that the
waters lie not upon the Liver, when Sweat is at
hand; for they might hinder its coming out.

Enchir. Me. l.
Pract.

XXII. Those Remedies, that use commonly to
be applied to the Wrists, are not to be rejected al-
together: for the opinion of the Vulgar is not
onely satisfied with them, because they think ma-
ny are cured with these remedies, but also they
may doe some good by communicating their virtue
to the heart by the large Arteries, which run to
the Wrists.

Riverius.

XXIII. The Diet in a Tertian ought to be thin
and spare. Wherefore it is commonly said, *That
we must starve an Ague*: and common Experience re-
futes, that by abstinence the fit is kept off beyond
the usual time. Two things especially should be
observed about Diet. 1. That the Aliment be thin,
and that nothing sulphureous or spirituous be given:
for so the Conflagration of the blood is lessened.
2. That when the fit is upon one, or coming, no
food be given, wherefore in abstinent persons the
fit is lighter and sooner ended.

XXIV. Not a few lusty young Men, in a fit of
a simple and exquisite Tertian, have been killed in
three hours space, with abundance of clothes laid
on them, by such as onely had respect to the Cause,
they being spent with thirst and sweat.

Fernelius.

XXV. If a Tertian ague, because of the ill con-
stitution of the Patient, or through some errors in
Diet or Physick be so settled, that after a long con-
tinuance the fits grow still worse; and if they be
very weak with a continual lowness of Spirits,
Thirst and Heat, with loss of Appetite, want of
Sleep, a weak Pulse, red Urine, and full of Con-
tents, a little different Method of cure must be in-
fisted on. In this case we must first endeavour to
take away the Dyscrasie of the Blood; wherefore
the Patients must be kept onely with a thin Diet, as
Barley or Oat-meal grewel, with opening roots boi-
led therein (wholly abstaining from broth of meat.)
Let the Belly (if need be) be kept loose with the use
of emollient Clysters, and (omitting Catharticks)
I judge we must principally insist on digestive Me-
dicines onely, which may thin the Blood, and gen-
tly carry off its ferous impurities by Urine, and
on strengthners, which may strengthen the Bowels,
and recruit the Spirits. To this purpose, Apozemes
well prepared of herbs and roots that are gen-
tly diuretick, also Elestuaries made of temperate
Conferves, with salt Nitre, or the fixt of herbs,
and testaceous Powders, and Spirit of Vitriol mixt
therewith, are very conducing. When the Crasis of
the blood is a little amended, as if the Urine be
yellow, and not so high coloured, if sleep be qui-
eter, and thirst and heat abate, then Remedies to
stop the Ague fit may very properly be used: where-
fore febrifuge Epithemes may be applied to the

H h

Wrists,

Wrists, and to the Soles of the Feet: Also the Je-
suits Powder, or its *succedaneum*, or Powder of bark
of Ash, Tamarisk or Gentian, may be given in
white Wine with Salts mixt with them. After the
fits are removed, and the Patients are come to
their strength, and begin to have a Stomach, and
to concoct their Viduals, gentle purges will be
proper: they must yet abstain from high feeding,
and from any thing that has flesh in it: And no
question, but they will recover every day without
either strong purging or bleeding.

Willis.

XXVI. The time of intermission: with *Avicenna* nine
hours before the fit, with us, if the Patient be apt
to faint, and if it be summer time, four hours be-
fore the coming of the fit, that by the presence of
the meat perhaps the ascent of the Bile may be stopt.

Fortis.

XXVII. I have seen several young people, and
of more adult age, cured of Tertians, by the fol-
lowing food, without any other Physick or Potion:
But we must diligently consider, whether there be
any obstruction of the Pores, or condensation or
constriction of Body: For in Continual fevers,
which have their rise from bile, wherein we are
solicitous for the opening of the Pores, it must
not be given before evacuation of the whole: Af-
ter bleeding in Continual fevers, it may safely be
given. Take a white Loaf, three days old, cut it
into thin slices, and infuse it in Endive water;
squeeze some juice of sowre Orange upon it, then
scrape some Sugar on it, so that you may onely per-
ceive it by your taste to be sweet and sowre. Let
the Patient eat bread in this manner, on his well
day twice or thrice, and in the farthest declination
of his fit, before he sup any thing. This food has
a great virtue in it of abating the sharpness of the
bilious humour, and besides it quenches the im-
moderate heat of the Stomach and Liver, and streng-
thens both these parts.

Brudus de
viciu Febr-
ci, l. 3. c. 11.

XXVIII. This food is much in use among the
Spaniards, it is cold and a little drying, *Boil Spanish
Lentils in water with Parsly, green Coriander, Oil, Salt
and Vinegar, with a little Saffron*; You may give broth
of Lentils to any in Fevers, except such as are sick
of Quartanes, whom though I think I cannot much
commend them, so I think they are in error, who
forbid Lentils to all Patients; taking it from *Galen*,
2. de r. v. who says, they are not meat for Man, where
he treats of a Pleurisie, in which he forbids Lentils:
But letting alone a Pleurisie, they will certainly
be proper in a Tertian ague from citrine Choler,
if you consider the efficient Cause of the Disease,
and the quality it leaves in the parts. Citrine
Choler is a hot humour, and of a thin substance,
the most penetrating of all humours: Broth of Len-
tils produces the contrary qualities, for it has a
cooling and thickning virtue. Moreover, citrine
Choler by its sharp penetration makes lean every
part it falls upon: Broth of Lentils not onely stiffens
the part, that it is not so easily pervious to the pe-
netration, but by its equal driness it takes away
what is moist: Besides, Lentils are no improper
food, for such as in this Ague do sweat, and are
not relieved thereby. And if you say that according
to *Dioscorides*, Lentils dull the sight of the Eyes, are
difficultly concocted, and cause troublesome dreams,
all these things are attributed to Lentils, not to their
decoction. We do not find these mischiefs in Spa-
nish Lentils; *Dioscorides* writes, that the Stomach is
ill after them, but Spanish Lentils strengthen the
Stomach, and do not make it windy; Italian Len-
tils are larger and whiter, the Spanish are less and
a little reddish, nor do they excite troublesome
dreams, as is delivered concerning them: But if
you will contend that the Spanish have any vicious
quality, it is corrected by the green Coriander.
Whenever therefore you have a mind to thicken
the humours of the Body, or stiffen the parts of
the Body with heating them, broth of Spanish Len-

tils may well be given in meat: And if you make
it with Parsly, green Coriander, Oil, Vinegar,
Salt and Saffron, you will make a food most agree-
able to the ends aforesaid, temperate in the passive
qualities, declining to coolness in the active. *Idem, ibid.*

XXIX. In a pure Tertian some of the Arabians
judge, Men must abstain from all meat, wherein there
is flesh, yea they forbid little birds till an univer-
sal declination of the Ague. Indeed if they forbid
flesh on the day of the fit, I should think they did
well: but if they hold it may not be eaten on
the intermission day, I do not grant it. From *Hip-
pocrates* they affirm that a pure Tertian is judged
within seven fits, that is, contains thirteen days,
but the fourteenth is the term of acute diseases:
And a thin diet is proper for all diseases that are
judged within fourteen days; therefore no flesh
must be given because it surpasses the limits of a
thin diet. Moreover in this ague, bile, as being
too sharp, uses to heat, dry and corrode the parts,
and it is certain, the Stomach and Liver are more
affected with these Symptoms than they should
be, and that their actions are therefore weakened,
wherefore we must feed them with food of easie
concoction, which is of a contrary quality. And
since flesh is not easie concocted, nor abounds with
a quality contrary to the humour, but with a mid-
dling one, it is ill prepared by the Stomach and Li-
ver, whence it comes to pass that a good share of it
is converted into the nature of the humour that
causes the disease. Things therefore must be given
which are easie of concoction, and which are strong
in qualities contrary to the humour: We cannot
find this in flesh, but in herbs, fruits and seeds.
But we use to allow a Chicken or two made ready
with Barley, Violets, Liverwort, Prunes and juice
of Pomegranate, we give this broth in the declen-
sion of the Ague, and at some distance of time, a
forbition of Bread infused one hour in Endive wa-
ter, and on the intermission day we indulge the Pa-
tient Chicken broth, and we suppose that they
who thus prescribe advise well. Indeed a man can-
not invent a more wholesome diet, and which streng-
thens Nature more, and reduces the Body more ef-
fectually to a temper, the morbifick quality being
destroyed. Which we demonstrate thus, In a pure
Tertian there comes a double driness upon the Body,
the one positive, whereby the bile, of a dry na-
ture, affects the Body; the other from the con-
sumption of the natural moisture, which has its rise
from the Blood. We must help either driness: But
that the Physician may sooner help the second with
chicken broth, tempered with cooling herbs, and for-
bitions of the same, than with any herbaceous food,
is manifest from hence, that a great share of this
food is converted into blood, and but a little of
herbs and fruits. And if you imagine that every
the least particle of the body has a faculty bestowed
on it, whereby it attracts, what is agreeable, and
ejects what is troublesome, you must understand,
that Chicken broth or forbition of it, because it is
more familiar to humane Nature, does much more
moisten the exterior and interior particles. Be-
sides, since very little of Meats made of herbs and
fruits, is converted into laudable blood, it either
passes by Urine, or vanishes by the habit of the Bo-
dy, wherefore it is but a little that can be conver-
ted into blood, and moisten all the particles of the
body. Wherefore if we would hinder each driness
of the body, we must not give meat of herbs or
fruits alone, but together with them, things that
afford good nourishment, supplying indigent Na-
ture; for hereby the virtues of the herbs will be
more efficacious, when they are carried to the least
particles of the body: And of how easie concoction
Chicken broth and a forbition of it are, is well
known. Besides, in the intermission of the fit, and
before the accession, I think aguish persons must not
be fed with cooling herbs and meats, because the
herbs

herbs force the febrile heat inwards, and the meats retard the expulsion by Nature, at which time things that cool and bind the body must not be administered, but rather things which drive from the Centre to the Circumference, that we may imitate Nature acting regularly. We learn this from *Galen 8. m. m.* who after bathing, gave the Patient water wherein Parsly was boiled, before his fit. On the Intermiffion day we can doe no harm by giving the flesh of a chicken; for between the past fit, and that which is coming, there are eighteen hours, in which, Nature resting from her by past labour, has gathered strength, so as to be able to concoct a young Chicken, rightly boiled: And there remains the same interval of time to the beginning of the next fit, at which time there is no fear, that the fit will find the meat then unconcocted: for by how much sooner the anticipation is, so much sooner will the Ague end in a pure Tertian. Besides, Meats of herbs and fruits quickly conceive putrefaction from the fervent humour: wherefore horary fruits are of right forbid by Physicians in Fevers. As for what is said concerning the number of days, wherein a Tertian is judged, it does not at all hinder; for we take the form of the Diet from the constitution of the Disease, and the strength of the Patient, and we say, that he whose weakness is a little urgent, must be fed with a grosser Diet, than the disposition of his Disease requires. We say moreover, that they, who are of a rare habit of body, and have thin humours, and are of a hot and dry Nature, must have a grosser Diet given them, by reason the strength of their bodies is sooner wasted. Whence it is manifest that Physicians, who in a pure Tertian feed their Patients both days with a thin Diet, do cast them, that are of a thin habit, and of a hot and dry Nature, into a Consumption: Or, if they be of another complexion, they do, by their giving of cooling herbs and worts, cast them out of a pure into a bastard Tertian: Both which things the Physician must avoid, lest he either make the Disease more dangerous, or prolong it. And if the sick Person be troubled with thirst, it will indeed be much more beneficial, if you give him cold water to drink, (if there be need of it) which will quench thirst far better than to feed him with cooling herbs.

XXX. Whether does a Tertian or a Quotidian require a grosser Diet? Some think a Quotidian requires a grosser Diet than a simple Tertian, because it is longer, and seeing the grossness of Diet, and its contrary, is taken from the distance of the state, it must be, that these Diseases which are sooner ended, require a thinner Diet, and on the contrary, 2. Greater sickness and Symptoms prohibit meat more than weaker ones. But I will shew by three reasons, that they are mistaken, two of them from the Ague, the third from the Cause of the Disease, conjunct and antecedent. Let us suppose for example, two Persons, alike in temperature, age, habit of body, &c. that one of them were ill of a phlegmatick, the other of a cholerick Ague; in all respects alike, but in their Agues, and in the Causes of them; the Diet is taken from the strength, the Disease not prohibiting, and the onely scope of Alimony is preservation of strength, where therefore strength is most wasted, more food is required to maintain it, than where less is wasted, if we may, for the Disease. But it is manifest, that the strength is more wasted in a Tertian than in a Phlegmatick Ague; therefore more nourishment must be given in it, if we may, for the Disease: but we may, for the Patients are free from the Disease, and at perfect ease for a whole day and a night. But it falls out quite contrary in a Phlegmatick ague, so that neither the strength waists so much, nor may we doe so much, because of the Disease, for they are taken every day with their Ague, and oftentimes there is a subentrance of the latter, before

the first be over: Or it is but a very little time that they are quiet, and that, as small as it is, is not without some intrinsick motion, beginning to dispose to the Paroxysm at hand; so that we must of necessity feed the aguish person in one fit before another be off; Or, if you regard that, you may feed him within the time of his disposition to the next fit; which because it is worse, it remains that the first time must be chosen: but when the Ague is not yet off, it is clear, that less, and a thinner Diet must be given, and more and thicker, when the body is free from it, whence it comes to pass, that we must use a thinner Diet in a Phlegmatick, and a thicker in a cholerick Ague. Again, the report is, that the pituitous humour by farther coction is converted into bloud, and may nourish, for in those that are taken with this Ague, the Stomach, Guts, and Mesaraick Veins abound with pituitous excrements, which hinder the dissolution of the antecedent and conjunct Cause. The Conjunct you can no way better waste than by a thin Diet. As to the Antecedent Cause, by reason of the inequality of the pituitous substance, and the diversity of its quality, Nature has much more here to separate, concoct and convert, than in a Cholerick ague, in which for contrary reasons putrefaction is equally conceived. Hence it is manifest, they must be kept with a thinner diet, who have a Fever from Phlegm, than from Choler. Moreover, because of the multitude of the matter, which is usually coincident with this Ague, Meat does much hinder its subtilization, incision and consumption. But in a Cholerick one, as for what concerns the disposition of sincere cholerick humour, Meat does not onely doe no harm, but helps both to repress the sharpness of the humour, and to give a due thickness to an over thin humour. As for the reason alleged from the distance and propinquity of the State, we must know, that the course of Diet must not be directed in all Fevers according to the distance of the State, but onely in such as either by their continuity, or because of their Symptoms, endanger Life within a few days. But a Tertian, especially an exquisite one, is without danger, according to *Hippocrates, 1 Epid.* and how much it degenerates from this, by a mixture of Phlegm with cholerick humour, so far the Ague is not without some danger; for a Quotidian, whether it be nocturnal or diurnal, is not without it, as we learn from him, wherefore upon account of the danger that is in a Phlegmatick Ague, we must keep them that have it with a thinner Diet, according to *Hippocrates, 1. de v. acut.* But if any pain or danger appear, &c. *Galen* consents, who allows one ill of a Tertian, Birds, Eggs, stony Fish, Cock's Stones, &c. But *1. ad Glauconem* in a Quotidian he orders the giving of an incisive Diet, but it is manifest that such an one nourishes less than the things aforesaid. From these things any man may gather, that in a Tertian not pure, where Phlegm is mixt with Bile, a thinner Diet is requisite than in one that is exquisite: The very thing which *Galen l. 1.* teaches. In uncertain Tertians we must take more care, as much as possible, that we neither increase the sickness, nor destroy the Patient's strength, that must be afflicted a longer time. We perceive this farther from him, when in such uncertain Tertians, he orders the aguish to doe it onely every other day, which he did not advise in a pure Tertian: Therefore they that have a phlegmatical Ague, must be kept with a thinner Diet than they that have a Tertian.

Dr. Sydenham's Method of curing Agues with the Jesuit's Bark.

AS for what concerns the cure; it has been now well known to me for many years, how dangerous a thing it is in Tertians and Quotidians (which when they are new, and have put on no type, are still next door to Continual fevers) to attempt one by Sudorifics: For though it be very well known, that as soon as Sweat breaks out, restlessness, and other Symptoms, vanish immediately, and an Apyrexia succeeds, and therefore of consequence it must be Indulged a little, at least not hindered, when the fit is going off, yet it is very evident, that if Sweat be forced more than it should, the Fever which intermitted will prove continual, and the Patient's Life is in a hazardous condition, this man is saved, and the other perishes. The reason is this, unless my conjecture fail me, namely, that this profuse Sweat, when it exceeds the measure of the febrile matter, exalted so far by the heat of the fit, that it may then be cast off by despumation, is the rest of it laid out in inflaming the blood. Therefore while I considered with myself the ineffectualness of this Method, and of other Evacuations, that is, of Bleeding and Purging (both of which by relaxing the tone of the blood protract the Disease,) the *Peruvian Bark* gave me the most certain hope, concerning which I can safely say, notwithstanding the prejudice as well of the vulgar, as of some of the Learned, I never saw, nor could rationally so much as suspect any mischief befall the sick from the use of it. And indeed if I were as well assured of the duration of its effects, as I am of its innocence, I should make no scruple to give it the first place among all Medicines that are yet extant, for it is not only found to be of excellent virtue in this Disease, but also in Diseases of the Womb and the Stomach: So little reason has any man to complain of the unwholesomeness of it.

But the said Bark has got an ill name, for these reasons especially, if I am not mistaken. First, Because all those horrible Symptoms that attend an Ague, when it has tormented a man a long time, are imputed to the Bark, when indeed he has not at all tasted it, or taken it but once. Secondly, Because many reckon, seeing it drives away the Disease by an occult virtue, and not by sensible evacuation, that the matter causing the Disease, which should have been driven out, does lie shut up by the astringent Virtue of the Bark, like an Enemy within the Walls, ready to give new disturbance, and that the Patient is not quite escaped, when he still drags his Chain. But these men do not consider that the Sweats which end the fit, have cast off all that was gathered in the lucid interval of the fit, and there remains only the Seminary of the Disease, to be ripened in time; and that the Bark pursuing the flying fit at the heels, when all Provisions, or the sustenance of the Disease, which should have been sent in, is intercepted, the Bark cannot be said to retain that in the blood, which cannot be found there, unless as in *Embryo*; and therefore must not be held guilty either of those Fits or Obstructions which are commonly objected.

But by what means do we find, that the Bark drives away Agues, by its astringent faculty? He that would prove this, must of necessity first produce other Astringents endued with the like virtue, certainly I have tried the strongest of them, and I could never as yet obtain my end. But what would he say, if it cure some, who after the taking of it, go as often to stool (which happens to several) as if they had taken a strong Purgé? This it is for

a man to be truly wise and to keep himself within due bounds. But if any will deceive himself, and think that he is endued with other faculties, than what are subservient either to *Natural Theology* (that is, that due veneration may be given to GOD the Architect and Moderator of all things, with the profoundest prostration of Mind, which of right he deserves) or to *Moral Philosophy*, (that he may exercise virtue, and accommodate his Manners both to the private and publick good of Humane Society) or lastly to the *Art Medical, Mathematical*, or to some *Mechanick Trade* (which are assitant to the life of all men.) Let this man first draw any *Hypothesis* from the *Natural Philosophy* School, by which he can explicate but only one specifick Difference of things in Nature; for example, let him render a reason, why all Grass is every where found to be green, and no where of any other colour, &c. If he can doe this, I will with all my heart subscribe to his judgment; But if not, I will not fear to say, that all a Physicians care and industry should be bestowed in pumping out the History of Diseases, and in using those Remedies, which Experience being his Guide and Mistress, are able to cure them, yet ever observing that Method in Cure, which right Reason (founded not on speculative Imaginations, but upon the trite and natural way of thinking) shall dictate. I will therefore briefly declare what I have learned by practice, concerning this method, wherein we must give the Bark.

The *Peruvian Bark* (which is vulgarly called the Jesuit's Bark) about five and Twenty Years agoe, (if I remember aright) first became famous among our *Londoners* for curing of Agues, especially Quartans. And indeed for very good reason. Seeing these Diseases were seldom cured before by any other Medicine or method, wherefore they were called *opprobria Medicorum*, and truly were a reproach to Physicians. But not very long after it was damned for two reasons, and those no small ones, and so was wholly disused. First, because it being given a few hours before the fit, according to the received custom of that time, sometimes killed the Patient: Thus I remember it happened to a Citizen of *London*, one Alderman Underwood, and to one Captain Potter an Apothecary in *Black-Friers*. This tragical effect of the Powder, although very rare, did yet deservedly withdraw the best Physicians from the use of it. Secondly, because the Patient being rid of his fit, which would otherwise have come, and it seldom failed, yet within fourteen days he relapsed, that is, when the Disease was new, and had not spent it self by length of Time. Most men being swayed by these reasons, did utterly cast off the hope they had conceived of this Powder formerly: Nor did these value the keeping off a fit for a few days at such a rate, that upon such a score they would endanger their Lives by taking the Powder. But for several years since seriously considering with myself, and revolving, that the virtue of this Bark was not common, I was confident Agues could better be cured by no other Medicine, than by this Herculean one, if what care and diligence was necessary were taken. Therefore I contrived a long time with myself, how I might prevent the danger impending from the Powder, and the relapse, which followed in a few days, (which were the two inconveniences to be avoided) and by the help of it to promote the Patient to a degree of perfect health.

First of all I supposed the danger that was threatened, did not so much proceed from the Bark, as from the unseasonable giving it to the Patient: for when great store of febrile matter is gathered in the body on the intermission days, the foresaid Powder, if it be taken immediately before the fit, hinders the morbid matter from being eliminated in Nature's Method, that is, by the violence of the fit, which therefore being contrary to all reason shut

up,

up, usually brings the Patient into danger of his Life. Now I reckoned I could keep off this Mischief, and also put a stop to the breeding of febrile matter anew, if as soon as one fit was off, I should presently give the Powder, that the following might be stopt, and if on the intermission days, at set times now and then, I repeated the same, till a new fit were coming, and so I might gradually, and therefore safely, thoroughly tinge the mass of blood with the salubrious virtue of the Bark.

Secondly, since the Relapse (which usually happened within fourteen days) did appear to me to arise from thence, that the Blood was not sufficiently saturated with the Virtue of the Febrifuge, which how efficacious soever, yet was not sufficient at one time, utterly to exterminate the Disease, therefore I guessed nothing would be so good for preventing the fit, as a method of repeating the Powder, even when the Disease was conquered for the present, always at just intervals, that is, before the virtue of the preceding dose were wholly spent.

My Mind therefore, swayed with the weight of these Reasons, dictated to me the Method, that I now use. Being called to one ill of a Quartane-Ague, (suppose on Monday) if the Fit were to come on the same day, I meddle not, but onely put him in hopes that he shall be freed from the next. And therefore the two intermission days, (that is, Tuesday and Wednesday) I give morning and evening two drachms of the Bark, finely powdered, in Wine, or in form of an Electuary, with *Syrupus de Rosæ siccis*, what is sufficient, drinking upon it a draught of Wine. On Thursday at which time the fit is feared, I order nothing, because usually none comes, the reliques of the febrile matter being despumated, and ejected the blood by the usual sweats which completed the preceding fit, and the gathering of a new *minera*, *fomes*, or matter, being prevented by the repeated use of the Powder on the days between the fits.

And however, lest the Disease should return (which was one of the foresaid inconveniences) on the seventh day, after the Patient had taken his last Dose, I certainly give him the same quantity of the said Powder, (that is, one ounce divided into four parts) in the same method that I gave the former. But though the cure once in this manner repeated often make an end of the Disease, yet the Patient is not wholly out of harms way, unless he vouchsafe to observe his Physician, when he prescribes him the same Method at the same distance of time a third or a fourth time; especially when the Blood has been weakened with some preceding Evacuation, or the Patient has unadvisedly exposed himself to the cold Air.

But though this Medicine have no purgative virtue in it, yet through the peculiar temper, and Idiosyncrasie of some Bodies, it sometime happens that the Patient is violently purged after the taking of it, as if he had taken a strong Cathartick. In this case it is altogether necessary to give *Laudanum* with it, that it may not be able to perform this operation, so plainly contrary both to its own Nature, and to the Disease.

I take the same method in other Agues, whether Tertians or Quotidians; for upon the ending of the fit I immediately fall upon both, and I follow and press them (as much, that is, as their Nature will bear) by the repetition of the Medicine in the but now mentioned interstices of the fit; yet with this difference, that whereas a Quartane can very rarely be got off under an ounce, divided into Doses, the others may be so subdued with six drachms, that they will give some truce at least.

But Tertians and Quotidians, though after a fit or two they may seem to intermit, yet oftentimes they afterwards turn into a kind of Continual Fevers, and come onely to a Remission, even on those

days they promised an Intermission: especially when the Patient has been kept too hot in Bed, or has been punished with Medicines to carry off his Ague by Sweat. In this case taking an opportunity from the remission, be it never so little (for that is all I have left me to doe) I give the Powder just after the fit (as near as I can guess) giving a drachm and a half every sixth hour for four times, making no matter of the fit, because otherwise in too short an interval the Alexiterick virtue of the Bark cannot be communicated to the Blood.

And though the Agues which are now rise among us, after one or two fits incline to Continual Fevers, yet since they must be referred to the Intermitent (or Agues) I make no scruple to give the Bark, even in those that are most Continual of this kind, which being repeated in the manner aforesaid, will certainly bring the Patient to an Apyrexia, if the constant heat of the Bed, and the unseasonable use of Cordials, have not made it a Continual Fever; in which case I have more than once observed, the Bark would doe no good. Nor was it ever yet my hap to observe, that Wine, in which the Bark is given (which one might well suspect) did any harm to one in an Ague; but on the contrary, Heat, Thirst and other Symptoms of the Ague, did presently vanish, after taking 6 drachms, or to the value of them in another form, notwithstanding the Wine.

And whereas there are some that cannot bear this Bark in form neither of a Powder, nor of an Electuary, nor yet of Pills, I give them an Infusion made in the cold; that is, I infuse for some while two ounces of the Bark grossly powdered in a quart of Rhenish Wine. This Liqueur being several times passed through *Hippocrates* his Sleeve, and of a clear colour, is not so offensive, but that it may please the most delicate Palate; four ounces of the said Infusion having stood several days, seem to contain the virtue of one drachm of the Bark given in Powder. Which because it is neither ingratefull, nor burthens the Stomach, it may be taken twice as often as any other forms of that Medicine, namely, till the fits are gone.

For Children, whose tender age might be endangered by such a quantity either of the Powder or of the Infusion, as will conquer the Disease, I order 2 or 3 drachms of the Bark to be boiled in a pint of French Claret, to a consumption of a third part, and one spoonfull or two of the Colature to be given twice or thrice a day, according to their age, till the Fits come no more.

It must be observed moreover, that because the short interstices between the Fits in Tertians and Quotidians, do not allow time sufficient, fully for to saturate the Blood with the febrifuge virtue of the Bark, it cannot be expected, that the Patient should certainly miss the next fit after his taking it, as it usually happens in a Quartane: for in those the Medicine often will not perform the promised cure under two days.

And we must take notice, that if the Patient, notwithstanding the abundant caution, given before, do nevertheless fall into a relapse (which seldom happens in a Quartane, than in Tertians or Quotidians) yet it will be the part of a prudent Physician, not to insist too pertinaciously upon the method of giving the Bark at the said Intervals; but according to his judgment, to attempt the cure by some other means, to which, above all other things, the *Decoctum Amarum*, as they call it, is generally held greatly to conduce.

As to Diet and Regiment, the Patient must neither be kept from meat nor drink, which gratifie his Stomach; Horary Fruits notwithstanding, and cold Liqueurs (as very much helping to weaken the blood, and to bring the Ague again afterwards) ever excepted. Let him eat therefore Flesh, ease of Concoction, and of good juice, and let him use a little

a little Wine for his ordinary drink; by which thing alone I have sometimes restored sick persons, even them, whose bodies being weakened with the frequent recourse of the Ague, have eluded the virtue of the Bark, which was salutiferous to others. Nor ought the Patient unadvisedly to commit himself to the cold Air, till the Blood have obtained its pristine vigour anew. But above all things all manner of Evacuations whatever must be avoided, since even the most gentle purge, nay, a Clyster of Milk and Sugar, does most certainly bring the Patient into danger of the Disease, and perhaps into the Disease it self again. This is what I had in brief to say concerning the use of the *Peruvian Bark*: Nor had I a mind to indulge the pomp of Medicines: Since indeed they that add any thing to the Bark besides a Vehicle, necessary to transmit it to the Stomach, do offend either out of Ignorance, in my opinion, or out of Knavery, which a good man abhors from his Soul, who as being part of the same common Nature, can never be induced by any private profit of his own to put a Cheat upon those of his own Tribe.

Sydenham,
Epist. Re-
sponfor. 1.
Pag. 22.

Medicines especially made use of by Eminent Physicians in various Fevers and Agues.

In Fevers, properly so called.

Agricola.

Augustin.

Borellus.

Crato.

Crugner.

Faber.

Van Hel-
mont.

1. **OIL** of Antimony is good almost for all Fevers. ¶ And Spirit of Sal Ammoniack.
2. This is a most excellent food in a Colliquative Fever; Take the finest flower of Spelt, put it in an earthen Vessel, with which and Sugar make a *stratum super stratum*, till the Vessel be full. The proportion must be 4 ounces of Sugar to a pound of Flower. Bake this in an Oven till it be dry. Take 3 ounces of this meal, mix it with broth of flesh, and a fourth part Rose-water, and white Saunders half a drachm. Make a Ptisan. Of which let the Patient take as often as he pleases.
3. Take a piece of Cyprian Vitriol, infuse it in 5 pounds of water, drink 6 ounces of this blew water every morning for 6 days, if the Patient vomit, he will be cured within ten days.
4. The Sengreen, called *Vermicularis*, bruised with Vinegar and Barley-flower, and applied to the right *hypochondrium* in a Fever, that is not excessive burning, does much good. Believe the experienced. ¶ If the Fever be not very burning, make two bags of Barley flower, as big as ones back, and apply one to the whole back, when it grows hot, expose it to the Air, and apply the other.
5. Oil, Salt, or Magistery of Mother of Pearl, first made with distilled Vinegar, or precipitated with Spirit of Vitriol, is an excellent Sudorifick and Antifebrile, if it be mixt with Essence of Antimony, made of *Antimonium Diaphoreticum*. I call it *Mixtura Antifebrilis Diaphoretica*.
6. Butter of Pearl is a stupendous and very effectual remedy for the cure of a Hectick.
7. Take clear Aloes, the best Myrrh, and the best Saffron, each 1 ounce and an half. Let the two former be powdered fine. Put them in a capacious and strong Glass, seal it by melting the neck of the Glass, distill it in a moderate heat, lest the Glass break, till you see the whole mass concrete at the bottom, and the clear Oil to circulate with the water on the sides of the Glass, then open the neck of the Glass, and pour in some Cinamon Water, and distill them in wet Sand, upon which scalding water must gradually be poured, till nothing more will

come over the Alimbeck; and with this Medicine I have cured both Quartans and Continual Fevers.

8. It is found by experience that Burnet infused in warm Water presently cures a continual Fever. ¶ Water distilled off Water Melon is a great Medicine with some, for it presently quenches the heat of the blood. ¶ The water of Gourd is excellent in burning Fevers. A fresh Gourd is coated with fresh Paste, it is baked in a hot Oven with bread, and the water which is found within it is kept; or a whole Gourd is cut in pieces, put in a new earthen Pot, is baked and strained out, and a little Sugar is added.

9. In burning Fevers *Bezoardicum Solare, Martiale, Lunare, Joviale* or *Antibellicum Poterii* are very good, to stop the ebullition of the blood, and they are good in periodical continual Fevers. Hofmannus.

10. This is a certain experiment in burning Fevers; Take Speedwell, Mouseear each half an ounce. Make a Powder, infuse it in Wine, let it stand a Month. Let him drink often of it; it expells heat and cures any Fever. Kornthave.

11. *Nitrum Vitriolatum* (that is the coagulated Spirit of Vitriol) is good in all Fevers. Mynsh. ht.

12. Take of Spirit of Vitriol, Urine, each one pound. Mix them, distill them by retort, and a Crystalline Butter will ascend. Of which give one scruple, mixt with 3 ounces of water or phlegm of Vitriol, to the sick party. It is so excellent a Medicine that it has saved many mens lives; for it extinguishes the internal preternatural heat. Poppius.

13. *Sal Prunelle*, from half a scruple to half a drachm, is an excellent alterative, and much exceeds others, if it be dissolved in *Cardus Benedictus* water, and drunk, it cools powerfully, and quenches thirst. ¶ *Acidum Tartari Aluminatum* has a secret virtue in opening obstructions, and especially in curing Tertian agues. Rolinccius.

14. Take of choice Manna, as much as you please, distill it by a Cucurbit with a gentle fire, you will have an insipid Spirit; an excellent Sudorifick in all Fevers. Schroderus.

15. The Water or Phlegm of Alume is much esteemed by some in all sorts of Fevers, where, if it were mixt with its Spirit, it is like, it would be more effectual. Angelus Sala.

16. Take of Mucilage of Quince seeds, Fleawort seeds, Oil of Violets, fresh butter washt, each 1 ounce, white Wax what is sufficient, anoint the *Spina dorsa*. It is admirable good in Fevers of such persons as cannot take Medicines. Ben. Vict. Faventinus.

In a Malignant, Spotted, Pestilential Fever, and the Plague.

1. In the Plague, and after taking of Poison, the Essence of Antimony is very good. ¶ *Mercurius viræ fixatus* is very good in Pestilential Fevers. ¶ Also the flowers of *Antimonium diaphoreticum* are an excellent remedy in Pestilential Fevers. ¶ An excellent Bezoardick Vinegar; Take of the root of the greater Fern, Butterbur, *Angelica*, Tormentil, Elecampane, each 1 ounce, Powder of Serpents, red Myrrh, shavings of Hartshorn, each 1 ounce, flowers of Marigold, *Tunica*, each 2 pugils, seeds of Sorrel, Citron, *Cardus Benedictus* each 1 drachm and an half, Saffron 1 drachm, *Terra Sigillata*, Venice Treacle, each 1 ounce and an half. The best Vinegar 4 pounds. Mix them, set them in the Sun, You will make a Vinegar, than which nothing is more effectual, 1 spoonfull whereof taken in the morning, will preserve you safe from the Plague that day. ¶ Vinegar of Antimony. The dose 1 scruple, that day you take it, it preserves you from the Plague. ¶ Spirit of Nitre is of great use in Malignant Fevers. ¶ This diaphoretick mixture is of great efficacy in Malignant Fevers; Take of Spirit of *Terra Sigillata* 1 drachm, Tartar, half a drachm, Treacle 1 drachm, Magistery of Coral,

J. Agricola. Coral, Pearl, each half a scruple, Water of *Carduus Benedictus*, Citron, each half an ounce. Mix them. Make a draught for 2 doses.

Bartholinus. 2. Our Country people, in the Plague time, defended themselves onely with Vinegar of Marigolds, and they escaped without danger.

Boellus. 3. A certain Man cured several of the Plague, onely by applying a piece of the Monocerot's horn, and with an infusion of it in common water for their ordinary drink; and he gave this for prevention, for they that used such water, were not infected with the Plague.

Champegius. 4. Some say, who have tried it, that if in the beginning of a Pestilential fever, one drink 2 or three ounces of Juice of Marigold, and cover himself with Clothes, he will be free from that infection.

5. This powder was used with great success in the Plague, and is given by many (but erroneously) as a common cure for Fevers; Take Sugar-Candy 3 drachms, Ginger 2 drachms, Camphire 1 drachm. Mix them. The dose 1 drachm in Water and Vinegar, in which Tansie has been boiled, especially when the season is not hot. ¶ I could also prove the efficacy of this Eleatuary by good witnesses; it is made also of Camphire; Take of *Scordium* 3 drachms, Tormentil, White Dittany, Zedoary, Gentian, *Angelica*, Cloves, each 1 drachm, Saffron, Camphire, each 2 scruples. Mix them. Make a powder, sprinkle it with Water of *Carduus*, in which are dissolved of Treacle 2 drachms, and with Syrup of Juice of *Carduus*, and of *Scordium*, make an Eleatuary. The dose 1 drachm, or more, in *Carduus*-water.

¶ Nothing is better, to preserve children from the Plague, than Bole-Armenick, with a little Tormentil and Citron-pill powdered, which may be strewn on their Meat. ¶ In a Pestilential fever the following Water is a truly royal Medicine, and is highly commended; Take spirit of Malmsey-wine, eight times distilled, 8 Measures; put to it of root of Tormentil, *Serpentaria*, each 1 ounce, *Angelica*, Zedoary, each half an ounce, Citron-peel, Cinamon, each 1 drachm; let them stand 3 days in a glass stopt, and in a warm place, then these things being cast away, and strained out first, pour this Elixir again into a glass, and let these things, tied up in Linen, be put into it; Take of fresh *Sperma Ceti*, Ambergrise, best Rheubarb, each 2 drachms, Musk half a drachm, let the Vessel be well stopt, keep it. One drop of it, in Summer time, is taken with Sugar of Roses, for preservation; to those that are infected, one ounce may be given, with Water of *Carduus Benedictus*, Scabious, or *Scordium*, adding 1 drachm of this Powder; Take of Hartshorn, Unicorns-horn, each 1 scruple, *Terra sigillata* half a drachm, Pearl, Emerald, each half a scruple, Camphire 7 grains; 5 grains of Bezoar-stone may be added; and every 3 hours 1 scruple of this powder may be given with Water of Water-lily, Sorel, &c. and when the Patient has taken it, let him Sweat. ¶ I have learned by certain experience, that to pour some Spirit of Malmsey-wine upon Amber, and keep the Glass close stopt, and every morning to take a few drops with Bread, is an excellent preservative from the Plague.

Crito. 5. Elixir Alliatum is reckoned a great Preservative from the Plague; it is made thus; Take twenty heads of Garlick cleaned, bruise them, put them in an Alembick, pour to them rectified Spirit of Wine, till it stand four inches above, distill it in *Balneo* by cohobations, always putting in new Garlick; in the last distillation add of Camphire, tied in a rag and hung in the nose of the Alembick, 1 drachm, distill it as before. ¶ There is a most secret virtue against the Plague in the herb Milfoil whole, with its Flowers, with which onely the Buriers use to guard themselves in the greatest Plagues.

Deodatus. 6. A compound Oil is made of Scorpions, and is much celebrated amongst Chymists, it is commonly called *Oleum Clementis*, it shews wonderfull effects in

Poison, and in all Pestilential Diseases, reviving them that are half dead; which Oil I highly commend in this case, if the Arteries, and the region of the heart be anointed onely with it.

Pet. Salius
Diverfus.

7. A Salt is made of the ashes of a burnt Toad, with Water of *Carduus Benedictus*, or Meadow-sweet. The dose half a drachm in *Carduus Benedictus* Water, for a Sweat in the Plague, which it powerfully promotes, and it is very good to cast the Plague out thereby.

Faber.

8. I take Earth-Toads, and hang them up; and dry them in the Air, then I lay them on a hot Tile, to make them dry, I powder them; but first I anoint the Pestil and Mortar with Oil of Scorpions, that the Powder may not get into my Nose, and hurt my brain with its poisonous quality; I take of this Powder 1 ounce, sowre Leven 4 ounces, the best Treacle 1 ounce, leaves of green Rue 1 handfull. I mix all these things well with Honey, and apply it to the Bubo twice or thrice a day. This Plaster draws the Poison out of the body wonderfully to it self; a whole Toad dried, and applied to a Bubo does the same.

Guilh. Frz.
bricus.

9. This is a most noble Bezoardick Tincture; Take of *Mistura simplex* 3 ounces, Berries of the herb One berry 3 drachms, *Scorzonera*-Root 4 scruples. Make an Infusion and digest them. The Dose 1 scruple to 2 scruples.

J. Mich. Pehr.

10. I especially commend *Flammula Jovis* to be applied to a Bubo, because it draws much, and raises blisters, by which the Poison is purged out.

Hier. Fabri.
cias.

11. This Plaster is commended above all others for Swellings and Pestilential Buboes; Take a Frog and a Toad dried, powder them, add thereto of Gum *Opoponax*, Frankincense, each 2 ounces, *Galbanum* 1 ounce, *Serapinum* 4 ounces, *Bdellium* 3 drachms; pour to them Rose-vinegar what is sufficient, boil and dissolve the Gums, add of Camphire, Oil of Sulphur each 1 ounce. Fry them in a Frying-pan into the form of a Pultes, and apply it hot to the Swelling, repeating it every six hours. ¶ This is very good to anoint Carbuncles; Take of *Unguentum Basilicon* 1 ounce, fat of Vipers 1 ounce, extract of *Scordium* 2 drachms, Treacle 2 drachms, Juice of Lemons, Oil of Scorpions, each half an ounce. Mix them. Make an Unguent. Anoint the Carbuncles, ¶ Above all other things, which by experience are found good to preserve from the Plague, Vitriol is the thing: To the stronger sort it may be given to 1 drachm dissolved with Honey and Water; for the weak it is prepared with Rose-water, and ground very fine, at least four times, and so half a drachm of it may be given with Wine or Honey. ¶ In a Malignant Spotted Fever this Cordial-water of mine is most excellent; Take of Juice of Goat's Rue, Sorrel, *Scordium*, Citron, each 1 pound. Mix them. Add 1 ounce of Treacle: Infuse them in warm Water, then distill them in *Balneo*. The dose half an ounce morning and evening. ¶ This is a most excellent Powder, which preserves from, and cures the Plague; Take of White Vitriol (it is first powdered, and infused in water, then it is dried, and this is done three or four times, adding a little Camphire) of White Dittany, Tormentil-root, each 2 drachms. Make a Powder. The Dose is 1 drachm in Water of Plantain, or Roses, or Sorrel.

Rod. à Fons.
seca.

12. This Powder of mine was very good; Take of Root of Dittany, Tormentil, Bole Armenick prepared, *Terra sigillata*, each 3 drachms, Roots of Gentian, Butter-bur, *Tunica*, each 2 drachms, red Sanders 1 drachm, shavings of Ivory, Citron-Pill, red Coral, Bone of a Stag's heart, Root of Zedoary, each half a drachm, prepared Pearl, both the *Bebens*, each 2 drachms, Amber, Unicorn, each half a scruple, leaves of Gold and Silver, each No 3. Make a Powder. The Dose in preservation 1 drachm, in the cure 4 Scruples.

Forestus

13. This is an excellent preservative against the Plague; Take of Sugar-Candy powdered 4 ounces, imbibe

imbibe it with dulcified Spirit of Salt, (which is thus made; Take Spirit of Salt, and Spirit of Wine, each equal parts, sublime them three or four times by a retort, and they will unite inseparably, and grow sweet) to the form of an Electuary, of which take one drachm in the morning fasting; it will keep off all Putrefaction.

14. In a Malignant Fever, this is a great secret. Nitre steeped in Vinegar of Roses, and Juice of Prick-madame, applied to the Pulsæ, asswages heat and pain.

15. *Heinissus* his Pestilential Oil, which is made of rectified Oil of Amber, Citron, and Camphire, the dose, from five drops to half a scruple, does wonders in Pestilential Fevers.

16. I have observed, that *Bezoardicum minerale*, is not onely of use in Malignant and Spotted Fevers, and the Pleurisie; but is also a present remedy in the Plague.

17. *Contrayerva*-Root is a most excellent Sudorifick in Spotted Fevers.

18. Take the Rinds and Seeds of Twelve Lemons, Juice of *Scordium* three pounds, Juice of Sorrel, Galangal, Scabious, *Carduus benedictus*, each 1 pound, shavings of Hartshorn four ounces, old Treacle 6 ounces, being cut and bruised mix them together: distill them in *Balneo*. The dose 1 ounce, by it self, or mixt with other Liqueurs.

19. The Volatile Salt of Hartshorn has an excellent diaphoretick virtue in burning Malignant and Pestilential Fevers.

20. A Liqueur against the Plague, Take of the burning Spirit of Juniper-berries 8 ounces, rectified Spirit of Tartar, Spirit of Stag's blood, each four ounces, Spirit of Vitriol 20 drops, Cinamon, *Angelica*, Myrrhe, each half an ounce, *Laudanum opiatum* 2 drachms; infuse them in *Balneo* for twenty hours, then let the thin be poured off the thick by inclination, and keep it. This liqueur wonderfully resists the Plague, and other sorts of Poisons. The dose from 15 drops to 20.

21. This Powder is highly commended for cleansing infected houses, yea, and for preserving them from the Plague, if it be used for a fume morning and evening; Take of Juniper-berries four handfulls, Rue, Elecampane root, outer rind of Birch, Savine, Goats-horn rasped, each two handfulls, leaves of Oak, Myrrhe, each 1 ounce. Mix them. Make a powder. ¶ I have formerly given this powder in the Plague with good success; Take of Bezoar-stone twelve grains, Bone of a Stag's heart 1 scruple, prepared Emerald, prepared Jacinth each 7 grains. Make a Powder for two doses in some convenient water.

22. They say, that Scabious, with Nitre and fresh Hog's lard, is a divine remedy, to discuss a pestilential Carbuncle.

23. The Air must be corrected with a fume of Rams, or Goat's-horn: for there is a great and a peculiar safeguard in this, and it defends ones clothes. ¶ The Place where people sick of the Plague have lain, and are taken out, is cleansed from the contagion by nothing better, than crude Sulphur; if it be burnt in the room close shut, and the fume be kept in some time, and then the Windows set open, to let it out.

In Tertian Agues and Quotidians.

1. This hath been experienced in Tertian Agues; Take of Juice of Gentian condensed 1 drachm, or of the liquid 1 drachm and an half, Chicken broth 3 ounces, *Spec. Diarrhodon Abbatis*, and *Aromat. Rosat.* each 1 Scruple. Drink it.

2. For Tertians; Take a draught of the best White-wine, boil it half away, and then drink it, it will cause one to Vomit much Water. I have cured many so.

3. This is experienced for a Bastard-Tertian;

Take Spiders Webs cleansed, mix them with *Unguentum Populeum*, and make them into six Pills, two of which must be applied to the Pulsæ of the Temples, two to the Pulsæ of the Arms, and two to the Pulsæ of the Feet, laying Vine-leaves upon them, and binding them on three hours before the Fit.

4. One may very well purge on the Fit-day. I have often tried it, and in most the event always answered; In Tertians I doe this after the third or fourth Fit, in Quotidians later.

5. Chamæmil-water, drawn off the Juice, is an excellent remedy for long and pertinacious Agues, if one ounce be given in the morning fasting for two or three days. I have often experienced it.

6. I have not found a better remedy, as well for preservation as cure of Tertian Agues, than *Oxy-saccharum simplex*, which resists putrefaction, because of the Vinegar, and Juice of Pomegranate, or Syrup of Lemons. For by taking some of it every day, I preserved my self from an Ague; and others have cured themselves of Agues by it. ¶ I have found by long experience, that *Carduus benedictus* is good in a Quotidian Ague, though most use it a-miss in all Fevers.

7. Juice of Water-Cresses, Vinegar, each what is sufficient, with a little Salt. Give two or three Spoonfulls before the Fit in all Agues.

8. The fixt Salt of Wormwood becomes a more generous Medicine, if, when it is dissolved in Cichory Water, as much *Sal Prunelle* be added, and then they be coagulated together according to Art. Half a drachm, or a drachm-weight given them that are sick of a Tertian, in warm Beer, sweetned with a little Sugar, to make them sweat stoutly, is a Medicine much to be preferred before the *Antifebrile Crollii*, made of Shells.

In Quartane Agues.

1. Spirit of Sal Ammoniack is an excellent Secret in a Quartane Ague. The dose is from 5 drops to 10 in Cichory-water.

2. The powder of a Man's Skull given in drink Agricola. to one when he knows not of it, has been experienced to cure Quartane Agues.

3. Sal Ammoniack seven times sublimed, and *Benedictus*, made quite spiritual, taken in a draught of Wine or Beer warm, let him Sweat 8 days in the morning. This is excellent good for Quartans.

4. This is an experiment against a Quartane; Take of Seed of St. John's-wort 2 drachms, Ashes of Man's Skull 1 drachm. Mix them for 3 doses, 3 hours before dinner.

5. Some reckon this for a great secret; They take 2 drachms of Leaves of Betony powdered in an Egg, four hours before the Fit, and they repeat it three or four times on other days. And certainly it is admirable good in an inveterate Quartane.

6. After Universals, I anoint the Chine with Oil of Chamæmil and Dill, each alike mixt and hot, beginning at the Neck, down to the Buttocks; and after anointing I wrap him in warm Linen, and when I have done this thrice, not onely the cold Fit, but the Ague ceased.

7. A scruple, or half a drachm of crude Alume in the water or decoction of lesser Centaury, if it be given 5 hours before the Fit, and Sweat, if possible, provoked, I cannot sufficiently commend it in a Quartane.

8. I use to drive away Quartane Agues with a Plaster of a few dissolving and absterfive things, and it never failed me.

9. In a Quartane Ague the following Plaster was the Secret of the Prince of Anhalt, which sometimes so extracts the febrile Infection, that now and then it raises blisters; Take of Pepper, Salt, Saffron, Garlick, which is covered with earth, of each alike, what is sufficient. Beat them in a Mortar to the form of a Cataplasin, put a little in a Rag, and

and apply it to the out-side of the Ring-finger, of the left hand, take it off the same hour it is applied, and repeat it before the Fit.

Hartod.

10. Flowers of Sal Ammoniack are excellent in a Quartane. ¶ Roots of crude *Asarum*, though crude, they provoke Vomit, with great perturbation, yet boiled in Water, and not in Wine, they are changed into a deopillative Diuretick, which the Spiciness that lies in it, does shew. *D. Oheimius* fled to this, as to his last refuge, in tedious Fevers, depending on inveterate Obstructions of the *Hypochondria*.

Hofmannus.

11. Against a Quartane, as a famous thing, I recommend distilled Oil of Pepper 4 drops, given with extract of Gentian. Also Flowers of Sal Ammoniack, or the Salt thrice sublimed, with extract of Spleenwort, or lesser Centaury. Also Spirit of Nitre prepared with Sulphur. Also Spirit of Vitriol of Mars and Venus, given in Gentian or Treacle-water. And outwardly I must highly commend Sage, Rue, and Shepherds-purse with Vinegar, applied to the Pulfes.

Christ. Lan-
gius.

12. I was in fear of the Fourth Fit of a Quartane, and before it came I drank a little Spirit of Wine, or *Aqua vitæ*, sweetened with sugar, and I saw no Fit, but had an end of my Ague, to my great joy.

Lotichius.

13. One that was ill of a double Quartane, was cured with 3 doses of an infusion of *Senna* in *Aqua Riverii febrifuga*, which is nothing else, but Spring-water with Salt of Tartar, whose wonderfull effects we experience continually in all long Fevers, and in diseases coming from Obstructions. ¶ Extract of Germander, with Salt of Tamarisk, made into Pills, is commended as a most excellent Medicine for a Quartane.

Riverius.

14. I have often tried the following Medicine with success; Take of Leaves of Elder, Sage, Dovesfoot, Rue, each half an handfull, Marigold 2 handfulls, Salt and Wine alike, a third part. Beat them together, apply it to the Writs before the Fit. Remove them when there is occasion.

Rondeletius.

15. I can say from my own experience, that if Seed of St. John's wort be bruised, and given in Wine before the Fit, it does much good.

Varignana.

Fistula, or, A narrow and long Ulcer.

The Contents.

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One in the Breast, with a decay of the Os sternum, must not be cured by burning this bone. VII.
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Medicines.

I. THE Daughter of N. after a grievous pain in her Loins, fell into a troublesome *Fistula* in her Groin, which, by continual running, walt-

ed her body, so that in a short time she departed this life. The cutting of her up shewed an evident *Caries*, in a bastard rib, which continually sent out a sharp *ichor* into the flesh below, which being eroded, there came a long and anfractuous *Fistula*, which was beyond the Skill of Medicine. You may see the defect of the same Art in *Fistula's* of the *Anus*, whose beginning sometimes runs very high, either to the Loins, or the *Vertebrae* of the Breast, or sometimes to the Shoulders; whose inaccessible *Caries* the tortuous winding of the *fistula* does hinder from being searched with a probe, which also hinders injections, designed to cleanse the Ulcer, and does exclude the Hand, which might take out the vitiated Bone. Which nevertheless not being timely taken away, the Patient dies before his time, and the *fistula*, deriving its original from a remote *Caries*, does obstinately resist the Physicians cure. Whose lips though you clip open, and amplate (which yet is very good in cutaneous *fistula's*) nevertheless you will lose your labour, and you can never come to the farthest end of these sinuous windings; from whence so many branches, and so frequent rivulets descend by muscles and tendons, which lie deep, that though a Probe be never so dextrously put into such a tortuous *fistula*, yet it can never reach or remove the *Caries*, that is the cause of a continual *fistula*. *Tulpius, obs. 28. l. 3.*

II. The cure of *fistula's* is two-fold, one fictitious, false and palliative, the other true. Of the Palliative, *Galen* makes mention, *lib. de Tum. p. n. c. 4.* and *Avicenna 4. 4. tr. 4. c. 2.* When the *fistula* is dried up within, and healed on the outside, a *sinus* (or hollow place) remaining within; which is performed by putting drying Medicines into it, by keeping a good Diet, and by purging of the superfluous humours. By this means the *Sinus* is closed for a time, the orifice healing up: But afterwards, when any moisture is gathered in it, an Abscess is formed again, and the *fistula* returns. I do not deny, I sometimes use this false cure for the Patient's consolation. For having purged the body, and ordered a spare diet, I leave off Tents (which I had a long time put in such incurable *fistula's*) and apply a new Sponge, wet in some Mineral water, and wrung out; or in some *lixivium*, or Lime-water. By this means, the whole was closed outwardly, so that the *fistula* seemed to be cured, the Patients being dismissed. This sort of cure sometimes wanted success, sometimes not: for the integrity and soundness of the Skin conduces much to the cure of external Diseases, because the natural Heat expires by the Aperture, and the natural functions of the part are not performed. But when the orifice is stopt, the natural heat is kept in, then it performs aright the work of concoction, it digests and discusses excrements; so that sometimes the *sinus* fills up, which it would not have done, if the *fistula* had remained open. Therefore the palliative cure of *fistula's* must not be rejected.

III. A *fistula* in the *Perineum*, if it come from an internal cause, is never perfectly cured, it is indeed sometimes skinned over, but it quickly returns, upon the least internal cause, yea, and sometimes if it be stopt up for a while, grievous Symptoms do follow. Once, when I had scarce cicatrized a *fistula* in a Man of Threescore, which followed a caruncle and retention of Urine, and the Patient after the cure was continually tormented again with difficulty of Urine, and other Symptoms; I was forced to open the *fistula* again, upon which he not only recovered, but lived to above Threescore and seventeen. Hence Patients may learn, not to be so solicitous for the cure of such *fistula's*; for they are a proper passage for the excretion of much excrements, which, by the benefit of Nature, are cast off thither, from the Liver, Kidneys, Bladder, and the Spermatick Vessels: For I have observed, that they who have had such *fistula's*, are usually free from other

Aqua pē-
dens.

other worse Diseases. I reckon Ulcers in the *Peritonæum*, when they come to the Urinary passage, almost incurable, because of abundance of Excrements, wherewith old men abound, and the weakness of the excretive faculty, arising from *Venus*, or from some other cause, so great, that it cannot discharge the Urine, full of excrementitious humours, by the anfractuons passage of the *penis*. We need not despair of a cure in Children and young Men.

Hildanus.
cent. 5. tit. 75.

IV. Some must not be cured, according to *Hippocrates* 6. *Epid.* 3. 39. & *lib. de Humor.* 3. that is, such as discharge the body of superfluous humours, and preserve from other Diseases: Such are in the lower parts, old ones, and remote from the principal parts. They must not be closed, yea rather, they should be opened, if they chance to heal up. I have known people, who have had a *fistula in ano*, without any mischief, for 25 years, yea, it has done them good. Besides, some *fistula's*, in their own nature, refuse a cure, according to *Albucasis*, *lib. 2. cap. 28.* such as reach to the great Veins, Arteries, or Nerves, the *Peritonæum*, Guts, Bladder, *Vertebra's* of the Back, and Ribs, such as are in any joint of the hand, or foot: For they do not admit convenient Medicines.

Fo: ab A.
q: apend-
te.

¶ I have often seen *fistula's* near the Eyes and the *Anus* cured, and pernicious Symptoms, and death have followed thereupon. I have also seen *fistula's* cured outwardly, and a *Sinus* left within, especially about the *podex*, out of which, sharp *Ichores* coming, by transumption, to the neck of the bladder, use to raise such Symptoms, as are ordinary in the Stone of the Bladder.

Sanctorius.

V. In one, who 27 years since broke his Leg, the wound could not be so healed, but that an *Ichor* would always be ouzing out of it, the Sore at last ending in a *fistula*. A few years after he was sent to *Madrid*, the care of his body being neglected, because of his business; yet he found, after a few Months, that the troublesome *Serum* stopt, and ran not again for 3 years. When he returned to *Copenhagen*, the *fistula* opened by little and little, and after the old manner ran a Serous matter daily for several years. He is sent again into *Spain*, upon some affairs, the wound closed up again, and did not run any thing for six years, while he abode at *Madrid*. Then returning to his Country, he found the hole opened again in a few Months time, which is not yet healed up, the moist Air in the North opening what the dry Spanish Air had shut.

Borrichius
in Adh. D-
nich.

VI. One had two deep *fistula's* under the Arm-pit, all that I had tried being in vain, I cured him thus: I burnt both the *fistula's* to the very bottom (they reached to the very ribs) with a red-hot Iron, without a Case, several times, till the *Callus* was wholly and equally taken off the *Sinus* of the *fistula's*. To deterge the *Eschar*, I used Tents, first of all long and thick, anointed with Butter, afterwards with a digestive: When laudable *Pus* appeared, I put in others anointed with *Unguentum ex betonica*, which I made every day shorter and shorter. These things being removed, I applied a Bolster of Linen under the Arm-pit, compressing it with a strait Ligature, I perfectly cured the Patient in 20 days time.

Marchetti,
lib. 3.

VII. We must never proceed to burning of the *Os Sternum*, because it does not scale off, as others do, which when they are not altogether corrupted, but only in part, if they be burnt, only what is perished falls off, the laudable part remaining: Which does not so fall out in the *Os Sternum*; because it being tough, does not so easily scale off: but rather, when the burning reaches to the internal part of it, the whole corrupt part must of necessity abscede, not indeed in 30 or 40 days time, as other bones do; but sometimes in three years; wherefore I advise you, never to burn the *Os Sternum*: For I have observed it to abscede in many not under 2 or 3 years: So that the cure is easier and safer by Abrosion.

Idem, lib. 39.

VIII. One had a Swelling with a *fistula*, above the left side of his Collar-bone, whose orifice was so narrow, that it would scarce admit a pin's point. About six months before, he had been ill of a Fever, which ended in an Abscess in that place. The Ulcer, after it had remained open for four weeks, closed up, a swelling and hardness remaining behind. When he told me this, I prescribed things to evacuate bilious humours, wherewith he abounded, for the matter was yellow, which the *fistula* voided. Then I dilated this very narrow *fistula*, not with any cutting instruments (whereby not only the pectoral Muscle, which had been sufficiently hurt by former incisions, might be more hurt, but also there was fear, that if this were not used dextrously, the Jugulars being dissected, or but a little hurt, might bleed the Man to death) but with a tent of dried Gentian-root, tied to a thread: The next day I took it out swelled with a bilious ichor, and black at the end, and searching the quality of the *Sinus*, and cause of the colour, with a Probe, I found some part of the clavicle rough and moveable: Then I put in a root thicker than the former, anointing the adjoining parts, to hinder imminent inflammation; The third day I put in a bigger piece of Gentian-root, and so consequently, till the hole seemed wide enough: The sixth day I filled the *fistula* with round pieces of prepared Sponge tied to a Thread: The seventh day I took them out, and the *fistula* was wide enough for taking out of the Bone, which I took out: The eighth day the blood stopping, I strewed this powder on the found bone, uncovered; Take of Root of Florentine Orice, *Aristolochia rotunda*, *Peucedanum*, each 1 scruple and an half, *Euphorbium* half a scruple, Myrrhe 1 scruple: I applied dry Lint, till it was healed up with firm flesh: I deterged the Ulcer every day, by strowing on some powder of white Sugar (which mitigates Bile) every day, and I cicatrized it with *Diapalma* Plaster. For the hardness remaining, *Emplastrum Oxaleum* was applied, with a Linen-cloth three double, strained out of a decoction of strengthening things in Wine, making convenient ligature, that the relicks might be dissolved, and a new afflux of humours might be hindered. Thus within a month and 14 days the Patient was cured.

Scultetus,
Anatom. obs.
51.

IX. A young Man 18 years old, had a hard Swelling in his right side, which came to suppuration: Being ill treated, it turned into a callous *Sinus*, or *fistula*: Universals premised, to search the quantity and quality of it, I dilated the extreme narrow orifice, with the pith of Elder very much writhen, so that it would admit a round Probe, with which gently put in through the corruption, I touched a rough edge of the rib. To consume the *Callus*, I put in a tent of lint writhen, anointed with this Ointment; Take of powder of Henbane Seed 1 scruple, burnt Alum, burnt Vitriol each 1 scruple and an half; Butter waht in Plantain water what is sufficient. Mix them. When the *Callus* was extirpated, I put in a tent of Lint, the top whereof, wet in *Decoctum divinum*, I strewed with powder of *Euphorbium*, to correct the Caries of the rib: but the rest of the tent, that I might prevent the regeneration of *callus*, I anointed with this Unguent; Take of *Unguentum de Betonica* 1 ounce, *Unguentum Egyptiacum* 2 drachms, I put it in every day, till the corrupted rib, after 2 months, cast off some scales, which being taken out, I applied every day a less tent, dipt in Ointment of Betony, till the Ulcer being filled up with solid flesh, was cicatrized by benefit of *Ceratum divinum*.

Idem, obs. 42.

X. When an Ulcer is old and fistulous, we must have recourse to that admirable magisterial Syrup, described by the most excellent Fallopius, *lib. de Venerib.* c. 38. which does good with the greatest success, in any inveterate *fistula's* of the breast, whereof this is a description, to which we also add China. Take of Root of Marshmallow, Leaves of Millefoil, Horehound,

Horehound, Mugwort, Dock, Coleworts very green, Burnet, Bramble tops, Roots of Madder, with Leaves of *Aristolochia rotunda*, Feverfew, lesser Centaury, Honey-suckle, each half an handful; *Olibanum*, half a drachm; *Sarcocolla*, 1 ounce; Seeds of Anise, Plantain, Fenil, Hemp, each half an ounce; Saffron, Rheubarb, greater Centaury, each 2 ounces; odoriferous White-wine what is sufficient, China 6 drachms. Bruise the Ingredients, infuse them in the Wine for 24 hours, boil them without Water, and strain them, add of the best Honey 4 pounds. Let this Decoction boil up one ebullition with the Honey. The Dose is 5 ounces in the morning.

Epiphanius.
Ferdinandus,
Hist. 32.

XI. Some order the *Fistula* to be filled with Hellebore, and that it must be done for three days; but when I did it once in a *Fistula* of the *Spina dors*i, near the region of the Heart, the Patient fell into frequent Swoonings. Therefore I think it no safe Remedy, especially if the *Fistula* be in any part of the Breast.

Chalmetus.

XII. A Matron had been long troubled with a Defluxion upon her Teeth in her nether Jaw, and when she had not taken care to get the Tooth pulled out, upon which the Defluxion fell, at length, after an Inflammation and great Pain had risen about the roots of it, an Abscess gathered, which breaking outwardly, the Pain abated. The Ulcer degenerated into a *Fistula*, which remained even for fourteen years. Having undertaken the Cure, I found the upper part of the Tooth, at the Root whereof the *Fistula* was, eaten away almost to the *Alveolus*. I drew out the Root of the Tooth, afterwards I applied a Tent anointed with my Ointment, to waste the Callosity; when the Callosity was eroded, I srewed every day some Powder of precipitate upon it, and applied *Diapalma* Plaster, nor did I alter the Medicines before the Ulcer was perfectly cured, which was within a month. And the Root of the Tooth was eroded, unequal, and covered with a stony matter lying on it in manner of Scales.

Hillanus,
cent. 3.
obs. 33.

XIII. A Lying-in Woman had an Inflammation in her right Breast from concretion of Milk, which being too much hardened with Dissolvents, turned to an Abscess, then into a deep *Fistula*, with a *Callus* of a narrow orifice. Her Body being purged, I sufficiently dilated the narrow orifice of the *Fistula* with tents of Gentian; afterwards I wasted the *Callus*, by once putting in a tent of Lint, smeared with the following Ointment; Take of Mercury precipitate, burnt Alum, Verdigrisee, salt Nitre, each equal parts; Mix them with Whites of Eggs beaten, as much as is sufficient. It quickly extirpates the *Callus* of *Fistula*'s (but in the nervous parts especially, and such as are endued with an exquisite sense, not so pleasantly and safely) When the *Callus* was consumed, the Ulcer was cleansed with *Unguentum Aegyptiacum*, incarnated with *Unguentum de Betonica*, consolidated with *Ceratum divinum*, and the reliques of the hard tumour were dissolved with *Ceratum oxaleon*. *Emplastrum ex spermate Ceti Mynsichti* cures hard Swellings from curdled Milk.

Scultetus,
Armanus,
obs. 43.

XIV. When a *Fistula in ano* reaches to the Gut, the finger anointed with Oil of Roses must be put into the anus, and also a *falceolus* (or a crooked Incision-knife) with it, and when the finger is thus put in, the *falceolus* must be so guided, that it do not err in cutting into the callous substance, that it may also cut the hæmorrhoid Veins. I approve rather of Incision, than of Detraction of the *Callus*, which is made by ligature. But we must take notice, that the *Callus* must not reach above four inches lengthways into the Gut: Otherwise we must use only a palliative Cure; or when it reaches to the bladder or the os sacrum, proceeding beyond the sphincter, because the sphincter would be cut, and an involuntary excretion of the *feces* would follow. Then therefore it must be twice every day fomented with a Decoction of Mullein, and the Decoction must be injected.

Chalmetus.

XV. *Celsus*, l. 7. c. 4. and his Followers do cut a *Fistula in ano* which does not penetrate, by breaking through the bottom of it, they gather both ends of it with a twisted silken thread (yet red silk single, because of its tenuity and tincture, cuts and eats in sooner) and so straining it very hard with a little piece of a stick transverse, they cut the whole sinus, or the Interstice of both holes. But *Aquapendent* deservedly rejects this Incision of *Fistula in ano* by a thread, because it is too slow, and puts a Man to continual pain: And, he says, it must never be used, but when People are afraid of the Knife. *Scultetus*, Fab. 45. propounds a new way of Cure by the edge of a *Syringotomus* and a thread, which joins the opinions of *Celsus* and of the later Chirurgeons.

XVI. Yet *Fistula in ano* in old Men, deriving their original from some old Fluxion, as from the Hæmorrhoids of long continuance, cannot safely be cured, unless, before the Wound be healed, an Issue be made in the Thigh three or four inches above the Knee, for evacuation of the matter daily gathered, which used to be evacuated by the old *Fistula*.

Scultetus.

XVII. Penetrating *Fistule* are very easily and safely cured without an actual Cautey, which some commend, to consume the *Callus* in *Fistula*, if when the *Syringotomus* is passed through, the Blood be stoppt, and Hæmorrhagie prevented, and the *Callus* washed with this Medicine; Take of Mercury precipitate half a drachm, Honey of Roses half an ounce. For the sphincter, according to *Hippocrates*, lib. de Hæmorrh. may safely be cut any way, without prejudicing its office, if but an eighth part of it be left untouched; otherwise an involuntary excretion of the *feces* would follow, and then most certain Death.

Idem.

Medicines especially made use of by eminent Physicians.

1. I have seen *Fistule* of the Feet often cured with this Remedy: First wash them with a Lye of Vineashes; then use an Unguent made of Sugar, Olive, Mercury and Wine, each equal parts.

Borellus.

2. This wonderfully cures *Fistule*; if they be often washed, and the hollow of them filled with an Arcanum mixt with Tincture of *Aristolochia rotunda* drawn with Spirit of Wine.

Faber.

3. The Bulb of Cornflag mixt with Starch, Vinegar and Foxes grease, cures *Fistule* and running Sores most effectually.

Laurentius.
Gius.

4. This is highly commended by many Authours, especially for drying up and healing a *Fistula*; Take of Water of the Vine 2 ounces, Malmsey wine 1 ounce, Honey of Roses 10 drachms, Myrrh, root of *Peucedanum*, each 2 drachms; *Sarcocolla*, *Aloe Epatiza*, each 1 ounce and an half; Mix them. Let them boil up onely once moderately, and let it be injected by a Syringe into the *Fistula*.

Pocettus.

5. A wonderful Water for *Fistule*; Take of green Shells of Wall-nuts, let them stand in the shade, distill them; Take of the distilled Water 7 pounds, distill it again, add of Honey 2 pounds, distill it again and keep it for use.

Pravotius.

6. After Universals are used, some commend this Potion; Take of Sanicle, Mugwort, Speedwell, *Saracene's* Confound, Winter-green, each 1 ounce; Savine 1 ounce and an half, Horse-tail half a drachm; Boil them in White-wine; Make a Potion, which if you would have more effectual, in every Dose mix of prepared Crabs-eyes half a scruple. For Savine and Crabs-eyes are very good to expell Bones, Pus, broken Veins and the like.

Schnier.

7. This is a most secret Medicine; Take of Tops of lesser Centaury 3 handfuls, Roots of greater Plantain fresh 1 pugil, Leaves of Germander, Scabious, each 1 handful; New-wine 3 pounds and an half. Boil them to half. Let the Herbs and Roots be well pounded and strained out hard; then boil them on a gentle Fire, to the consistency of Honey, and keep it.

Stokkerus.

8. This is an approved Medicine for a *Fistula*; Take of Leaves of red Cabbage, and the Seeds of the same, Roots of Madder, each equal parts: Bruise them in some Wine, and boil them to a third; strain out the Liqueur, and boil them to the consistency of Honey. Give two spoonfulls morning and evening every day. ¶ *Filipendula*, and the Grains found at the end of its Root are good for the same.

Tulpius.

Fluor Muliebris, or, Womens Whites.

The Contents.

How it may be known from a Gonorrhœa? I.
The blame must not always be laid upon the Womb. II.
Bleeding is sometimes good. III.
Cured within a month by taking a loosning Ptisane. IV.
Whether Diureticks be proper? V.
Whether they be always good? VI.
Every one must not be cured by a Sudorifick Diet. VII.
Astringents and Strengtheners must be seasonably used. VIII.
Issues in the Legs are good. IX.
Sometimes it is caused by the use of Catharticks and Baths. X.
Those Women that have a dry Nose, are usually subject to it. XI.
The Womb must be strengthened. XII.
A Malignant one imposes upon the Physician. XIII.
Medicines.

I. Some Women that are ill of a virulent *Gonorrhœa*, hiding their fault under an innocent name, pretend they are ill of the Whites, because in both cases abundance of filth is voided. But the Chirurgeon may easily distinguish the Whites from a *Gonorrhœa*, and he may satisfy himself, a *Gonorrhœa* will never be cured without Salivation.

Parvus.

II. The cause, which continually breeds the corrupt humour is sometimes in the Womb, sometimes in other principal parts. They are therefore grievously mistaken, who ascribe the cause of all that comes from the Womb, and of the suppression of the *Menses*, to the Womb alone. For in what Women cold Bowels, or obstructed, or scirrhus, have caused Crudities, an ill Habit or Dropsie, the corrupted humour being poured into several parts of the body, often falls upon the Womb, and tending that way purges the Body, which is done in some others by urine or stool.

Fernelius.

III. Seeing the Whites depend upon a *Cacochymie*, and it being drawn to the Veins by Phlebotomy, may infect the mass of Blood, there seems no room for Phlebotomy. Besides, since in this chronical Disease strength decays much, and the Body is often brought to a consumption, it appears, it ought not to be farther wasted by Bleeding, and be deprived of its Aliment. Yet it is thus determined, that if this Flux be not solitary and pure, but be mixt with a little blood, and look red, then blood may be let: As also if there be any great heat in the Liver, or acrimony of the bilious juice joined with this Flux. But in other cases, especially when the case is grown inveterate, it is better to abstain from Bleeding.

Riv. rius.

IV. A Woman of forty had been long troubled with the Whites; after many Medicines tried in vain, she was perfectly cured with taking a laxative Ptisane every day for a month; The Composition was this; Take of cleansed *Senna* 1 drachm, Coriander-seed prepared and scraped Liquorice each 1 drachm and an half, Spring-water wherein three drachms of Tamarinds and 1 drachm of Mastichwood have been boiled, one glass. Infuse them cold for one night, and let her take the colature two hours in the morning before she eat.

Idem.

V. There is no small difficulty to tell, whether Diureticks be proper? for they do not only pro-

voke urine, but the *menstrua* by heating and attenuating the humours contained in the Veins. Yet they are approved by all Authours, and by *Galen* himself, who used them in *Boethius* his Wife. The reason is, because Diureticks provoke urine primarily, and the *menses* secondarily and as it were by accident: then, the Kidneys draw the ferous matter continually, the Womb onely receives it. Wherefore it is likely, that the greatest part of these humours will go to the urinary passages.

Idem.

VI. There are some that maintain, all manner of Womens Whites may be cured by diuretick Medicines; but they are in a manifest error. The causes must be distinguished, and according to the various nature of them, different methods of cure must be insisted on. This Disease comes sometimes from the fault of the whole body, and sometimes of the womb. When the whole body is full of an ill habit or *cacochymie*, or the Liver is obstructed, or the Spleen or Stomach is weak, or the Head supplies excrements, then the womb may be thus troubled. We must consider, what humours abound, hot or cold, and how they are affected. For it shews they are hot, when this excrement is sharp and scalding, so as it eats whatever part it touches, and sometimes causes itching and Ulcers, or chaps with a sense of heat, besides, when it is stinking and yellow. It will doe well to consider here the temperament natural and acquisitious, the preceding causes, the habit of the body, and season of the year. Contrary signs will indicate contrary humours. When therefore the flux in the womb comes from these causes, when hot and bilious humours abound, I most suspect this method of cure by Diureticks: For who can think that a hot Disease can be removed by very hot and drying Medicines? for suppose, that evacuation made by Diureticks may doe some good, certainly greater damage will ensue from increase of the quality. Indeed it is my custome to reduce such bodies to a good state, Universals premised, with a Ptisane well prepared, adding the greater cold Seeds: And, I do profess, I have often cured with Asles and Goats milk uterine fluxes, that have been given over by other Physicians, in thin bodies, with sharp humours. This is my peculiar method; The first four days I give a quart of Milk, that the whole Body may be well purged, and to two quarts for fifteen days, but boiled; and the days following to forty one (in which time I generally found they were cured) I give Milk chalybeate. A most certain and rare Remedy. But if the humours be cold, and there be obstructions in the Bowels, if there be a cold intemperature of the whole, or of the principal parts, who will deny Diureticks given according to art? Does any one doubt, but they have a deobstruent, heating, cutting and cleaning faculty?

Augensius.

VII. *Hippocrates*, 2. de morb. Mul. vers. 116. among divers sorts of Uterine fluxes, propounds the yellow flux, in which what is voided is like a rotten Egg, when the white and yelk are mixt together, from a mixture of which a yellow colour arises, which indicates vitelline Bile. *Hippocrates* cures this Flux thus: First, he purges upwards with Hellebore, and then downwards, that the whole body may be rid of the *Cacochymie*. Secondly, he orders a moistning and temperate Diet, which may cool and qualifie the hot and sharp humours: Then he gives astringent Medicines, which may stop the flux, and he changes the Diet into a contrary course. If the Disease do not give way to these things, he returns to the former Diet, which he orders to be continued so long, till the acrimony of the humours abate, which the heating of the Ulcers, the abating of the Inflammation, and what is voided, will shew: for then he finishes the Cure by Exsicants and Astringents. Let the Moderns consider this method of cure, who go the contrary

contrary way to work; for they order a drying Diet first, and give a decoction of the same faculty to drink: And after they have by this their way of Cure brought the sharp, fretting humours to the height of acrimony, they betake them to a contrary method, and turn their whole intention to cooling and moistning: For they do not observe, that by giving Medicines in the beginning which are actually moist and potentially dry, they commit a double error, because they increase the humours by actual humidity, which should rather be diminished by evacuations; and by the drying and hot quality, the hot and sharp quality of the same humours is intended, and the hot intemperature of the Bowels, if there be any, is increased, and by this means they give assistance to the Disease and its Cause. And whenas afterwards they betake themselves to coolers and moistners, they commit other two faults; for by coolers they clog the body full of sharp humours, and by moistners, they dissolve the humours, which had formerly been dried by the preceding exsiccation; whereby they make the Patient every day worse.

VIII. Astringents must never be used, till the antecedent matter be well evacuated and derived, otherwise those humours retained run to the more noble parts, and cause grievous symptoms: As *Galen* writes it befell *Boethius* his Wife, whose Belly swelled with the preposterous use of Astringents, the serous humours being retained, which used before to be evacuated. This also must be observed, that while we use Astringents, the antecedent matter may be diverted another way, and the breeding of it hindered.

IX. They do not advise ill who in the Whites order Issues in the Hips and in the inside of the Legs; for so they affirm the Whites are amended, while the serous matter is averted to the crural Veins: They are good, especially if the Disease be inveterate. From *Galen*, 5. *Aph.* 36. it is evident, that among the causes which hinder monthly purgation, this is not the least, when the humours incline some other way than to the womb: like as he said, that some excretions, whether natural, or made by Art, as Ulcers, do make revulsion of and derive the blood from the womb, and transfer it to other parts. The same judgment may be given of vitious humours falling upon the womb. Do not we also know from *Hippocrates*, that making much water in the night signifies that one goes but little to stool?

X. I have observed, in Women that were never before troubled with the Whites, they have followed the taking of a Purge, when Nature by taking one has been excited to other excretions; and that many Women, when they have been bathing, have contracted this Disease, not by Contagion, but because by the constant use of the Bath, as Nature discharges the excrements by Sweat, so also the same by this excretion expels especially what is too thick to be carried off by Sweat.

XI. The Arteries of the Nose, and partly also the Veins, discharge their excrementitious humidities, into the spongy parts about the Nose and Jaws: for these Vessels are divaricated in the flesh of the Nostrils and Jaws, like Spiders-webs, and sweat out a kind of dew, just as water sweats through earthen ware before it is glazed. But how comes it to pass, that many void little or nothing at the Nose? I answer, that very few are found, who are of so happy a temper, as to be void of excrements. This Driness of the Nose and Palate is not so much a sign of a temperate Brain, as of a temperament *ad justitiam*. But they that have a foul blood, and are destitute of this evacuation by Nose and Palate, are not so without damage, but are liable to many inconveniences. *Francis*, King of France, had a dry Nose, but had Ulcers in his Ears. I have known Dames who have been deprived of this ac-

ceptable benefit of the Arteries carrying Phlegm to the Nose, and they have been continually troubled with the Whites.

XII. Some corroboration and exsiccation must be used to the womb at last; for although in the Whites it be not hurt in it self, yet in progress of time it contracts so much harm that the Whites come with the *Menses*, and can scarce be distinguished from them.

XIII. If the Whites be malignant, and the sharp humour exulcerate, be of an ill colour and dangerous, sometimes it proceeds from a virulent, external and contagious cause. And therefore Women must be prudently interrogated about the matter, that they may acknowledge the Disease, and not impose on the Physician under a pretence of the ordinary flux, to their own damage indeed; unless they acknowledge their fault, or lay it upon the Husband, whom we should rather blame, if there be some small suspicion, than blemish the Woman's Chastity.

Medicines especially made use of by eminent Physicians.

1. Twelve Citrull-seeds eaten every morning, and then a draught after them, is a good Medicine for the Whites.

2. The Fume of a Decoction of Shells of Pine-nuts in Vinegar, wherein burnt Marcasites are often quenched, is good.

3. This is daily experienced; A drachm of green *Filipendula* root given in Black-wine. ¶ A Woman cured several in this manner; Take bruised Clary, let it putrefie in Butter; then boil it a little, and keep it. With this Ointment she anointed the Woman's belly from the navel to the *pubes*, putting some of it into the *vulva*, and she ate some of the Herb. ¶ The Ashes of Kernels of Wall-nuts with Wine injected into the womb, stops this flux-wonderfully. ¶ They say this is a Secret; A Fume of Sage stops immoderate *menses* and all Womens fluxes.

4. Tincture of Corals, taken inwardly, is of great virtue, and *Crocus Martis*, if 4 or 6 grains be taken in Plain-water. ¶ Mastic-wood-wine, made by infusion and gentle ebullition, is a singular Remedy for the Whites, drank at meals for several days.

5. This is a very good Powder, wherewith many Noble Women have been cured; Take of the Jaws of a Pike, a Capon's head dried in an Oven, each half an ounce; Date-stones 2 drachms, Coriander-seed prepared, Aniseed toasted, each 1 drachm. Root of Water-lily, half a drachm. Sugar of Roses, 4 ounces. Make a Powder. Take some of it in Red-wine.

6. To discuss the reliques, and dry an oedematous body, nothing is better than a Decoction of *Guaiacum* drunk every day in the morning.

7. I have cured inveterate Whites with a Decoction of 4 or 6 ounces of Oak-leaves, with a drachm of Hares-venet, taken for 8 or 10 days.

8. The distilled Oil of *Daucus creticus* anointed on the *vulva*, after bathing, wonderfully cures the Whites, and heats it again.

Rolliaculus.

Forti.

Riolandus.

Loyse Bour-
geis.

Claudius.

Hartman.
Corbaux.

Rod. & Feni-
seca.

Forestus.

Frambesari-
us.

Mercurialis.

Turnbeus-
rus.

Fractura,

Martianus
c. m. in cir-
loc.

Riverius.

Cucius, de
Questis.

Platerus.

Fractura, or, Fractures.

(Of Fractures of the Skull, See Book III.)

The Contents.

- The loosening of the Bandage must not be too late. I.
 Barks of Trees must not be used instead of Ferulæ. II.
 In them and in Luxations over drying things doe hurt. III.
 The use of Emplastrum Oxycroceum not always safe. IV.
 The taking of viscid Aliments for breeding a Callus is hurtfull. V.
 The Stone Osteocolla must be prudently given. VI.
 The choice of that Stone. VII.
 The Bones are long in knitting in Women with Child. VIII.
 When a Callus is confirmed, it cannot be broke. IX.
 The knitting of the broken whirlebone in the Knee. X.
 Broken Legs must be kept in a convenient Posture. XI.
 The Plasters must not be too tenacious. XII.
 Nor the Bandage over strait. XIII.
 Medicines.

I. I Have seen many accidents from over-late loosening of the Bandage. One in Summer time broke his Arm in the Cubit: The Fracture being loosened, and the Plaster taken off, they found the Arm not onely ulcerated in three places, but so stinking, that there were Maggots, such as are in putrid flesh. The Bandage was taken off the thirteenth day. A decrepit Man broke his Leg a little above the Ankle by a fall from an Horse. The fifth day, when the Fracture was unbound, many livid Pustules, threatening a Gangrene, were observed. A Countrey Man had broke his Foot so, that it separated in the Joint, and was wonderfully contracted; the Bandage and Medicines, through the negligence of them to whom it was committed, not being changed, an Inflammation and Stench arising, the poor Man died. I also, when I had not been so carefull as I should in loosening a certain Noble-man's Fracture, and had not changed the Medicine from the fourteenth till the one and twentieth day, so great a Callus was bred, that a great deformity in the Leg had followed, had I not presently repressed the Callus.

Hildanus, cent. 2. obs. 91.

II. I disapprove of Barks of Trees, made use of now instead of Ferulæ in Fractures of Bones. The Lord N. had a Fracture with a Wound in his Leg by a Fall from his Horse: While I was setting of his Leg, at the persuasion or command of the Patient, instead of ferulæ I applied Green-willow-bark. When the Swathes were loosened, there appeared an impression in the musculous part, not far from the Ham, which imposed on an Emperick, as if there had been another Fracture. I, knowing the Impression and Pitting was occasioned by the Bark, anointed all the Leg and Thigh with Oil of Roses and Myrtles adding a few drops of Vinegar of Roses for Penetration sake, that the humours which were fallen down might be repelled; I rolled also the Leg from the Foot to the Knee with a roller wet in an astringent Decoction. When the rollers were unbound, the next day no inequality, nor any depression appeared. From that time I would never apply Bark of Trees, especially green, instead of ferulæ, for when they dry, they shrink about the Fracture, and sometimes put the Bones out of their place.

Idem, cent. 4. obs. 98.

III. One had the Whirle-bone of his Knee broken a-thwart, so that the parts of it wore drawn upwards and downwards by the Tendons. When the Chirurgion thought it had been well cured, the Patient no sooner stood up, and began to walk, but it parted again into two pieces. For in Luxations and Fractures I have seen Ligaments made shorter, and Tendons contracted, so that the motion has several ways been hurt.

Vellichio.

IV. Vulgar Chirurgions in Fractures, without distinction, do at the very beginning, or within a few days usually apply Emplastrum Oxycroceum to the Fracture, which sometimes is done not without great hazard. A young Man, having broke his Leg, fell into the hands of a Barber-chirurgion; he, having set the Bone, at the first dressing applied a Plaster of Bole Armenick, Barley-flower and the White of an Egg; when he had opened the Leg, the third day, he applied Oxycroceum: The same day it itched, and then grew very painfull. When I was called, some days after, I found the Leg inflamed, full of livid spots, and some infested with a Gangrene. The use therefore of such a Plaster is dangerous, especially in the beginning of Fractures and Dislocations; and so much more dangerous by how much more choleric, hot and full of Cacoehymie the body is. Hereby the part affected is heated, and the humours are drawn to it. Therefore it might very well be called Diabolicum by Vigo, l. 8. c. 16.

Hildanus, cent. 4. obs. 92.

V. I knew a Man forty years old, of a good complexion, to whom for a Fracture of his left Leg a Diet was prescribed of viscous things, as feet, heads and tripes of Cows, Sheep, &c. The Fracture indeed was cured in forty days, but by degrees he fell into a Cachexy; then he had a Jaundice and pains in his Kidneys and other parts, till at last he died of a Dropsie.

Idem, cent. 1. obs. 92.

VI. It is certain, that the Stone Osteocolla is endued with a singular virtue of breeding Callus: Wherefore I dare give it to all People in Fractures. But we must be carefull, how we use it in old Men, or extenuated persons, or such as have their innate heat but weak. A Nobleman, fourteen years of Age, who was lusty and sanguine, had both the Bones broken at the Ankle: I set the Fracture very well, I gave Osteocolla inward and applied it outwardly, the third, seventh, eleventh and fourteenth day; when I opened it, no excrecence or deformity of a Callus appeared, but on the twentieth, when I opened it, I found a Callus, especially upon the ridge of the Tibia, so great and high, that a perpetual deformity had followed, had I not immediately left off the use of Osteocolla.

Idem, cent. 1. obs. 90.

VII. That which is found out of the Earth is of no worth, but that which is found in the bowels of the Earth is very good; though, whether you look on the colour or shape, you will scarce find any difference: And therefore many that are sold about, though they be not adulterated, yet they are of no virtue. As soon as it is digged up, it is softer, friable, and of a brown colour when it has been exposed onely a day or two to the Air, it grows hard and white by degrees.

Idem, cent. 3. obs. 90.

VIII. A Woman thirty years old, seven months gone with Child, had her Leg broke in the middle by a Kick of a Horse. The Fracture was well set, but we had much difficulty to breed a Callus, so that in twenty three weeks the Bones were not firm. We gave her Osteocolla inwardly (a thing so famous for broken Bones) and applied it to the Fracture, but to no purpose; at length between the three and twentieth and the thirtieth week a Callus was bred, and the Fracture was knit. The reason why Callus breeds so slowly is, in my opinion, the Child, which draws to its nourishment what should go to the breeding of Callus. Besides, the innate heat being deficient in the part affected, Nature was not able to bring Osteocolla and other Medicines out of power into act.

Idem, cent. 5. obs. 87.

IX. Some foolishly advise, that Fractures which were not well set, and are already knit with a Callus, should be broken again, where the Callus is, it being first mollified with Fomentations and Laxatives. But if some space of time has past, and if it be confirmed and grown hard, the Bone near the Callus will break sooner than the Callus itself.

X. The Knee-pan broken or displaced brings no small inconvenience, without the Fastness whereof, the

the Knee flies out, like a door when the hinges are broken. At least the Knee-pan serves instead of a stay, to help one in going up-hill, or down-hill; of which N. complained, being hurt by a fall, wherein he broke his Knee-pan, and when in several Months it would not knit, and he came to me for help, I told him there was no other way, but to open the Skin, and rub the edges of the broken pieces of bone, and then to bind them up fast, to knit, and let them be kept bound a sufficient time. Which way of cure I found successfull in N. whose cheek-bone had been broken by a shot, and had grown on a lump.

Severinus.

XI. Some Chirurgeons commit no small error in curing broken Legs, when they will have a Man keep his Leg upright on his Heel, whereby, in process of time, more pain is felt in the Heel, than in the fracture it self, and that because of great and nervous tendons, which are inserted in the Heel: And this pain draws much humours to it, which are retained in the joint, and among the broken bones and ligaments of the foot. And because by this site the Veins and Arteries are compressed, and therefore the part affected, is, in some measure deprived of its heat, these humours must of necessity be condensed, and grow cool in the joint, and spaces between the bones of the Feet. Therefore, when the fracture is cured, the Foot is affected with a new trouble; for the joint can scarce be stirred without much difficulty, and sometimes other very bad Symptoms do follow. When therefore the Leg is rolled up with Rollers, *Splenis* and Stupes, and placed in a *Capsula*, or Case, fit for the purpose, such a posture must be chosen, as is least painfull. Wherefore the Leg must be laid sometimes this way, sometimes that, so that the Patient may lay himself sometimes on one side, sometimes on the other: For so, many accidents will be avoided.

Hildanus, cent. 1. obs. 93.

XII. We must have a care in the use of Plasters against a Fracture, that they be not so tenacious and sticking altogether in Children, and Women, as in others. Certainly, upon this score, *Emplastrum contra Fracturam Wirtzii*, of Root of Meadow-sweet is very commendable.

Wedelius.

XIII. But we must have a care in these very strong things, lest they, or bandage upon them, should gird the limb too strait, and so bring an universal Gangrene, as I have often observed. Therefore carefull Chirurgeons advise, the leaving some room free in binding of these fractures; the reason is, that the Vessels, Veins and Arteries, which could not chuse but be wrested in the confusion, may not be straitened together, and hereby the way being stoppt to the Blood and Spirits, be forced to conspire to the destruction of the part.

Idem.

Medicines especially made use of by eminent Physicians.

1. Take of Root of Comfrey, Leaves of Flixweed, bruise them and boil them. Apply them, they cure any fracture.

Paracelsus.

2. I do solemnly protest, that Meadow-sweet mixt in Plasters has wrought admirable effects in a

Simon Pauli.

fracture of the Arm, which was almost incurable.

3. For breeding a *Callus* many do commend the Stone *Osteocolla* in powder, a drachm whereof is often given in Comfrey water: But it is better in Sennert grown than in young people, because in these it increases *Callus* too much.

Fulmen, or Thunder.

The Contents.

The Cure of one that is Thunder-struck. I.

If there be a fracture of the bones, What must be done? II.

How the Eschar may be removed? III.

I. IN June, Anno 1671. A Maid 15 years old was struck down with Thunder in the house, as it were stoned, they in the house treated her as if she had been dead. She was laid upon a bed and stript, and first of all, all one Breast was red, intermixt with some blackness, as if she had been burnt with Gunpowder. Under her breast there were brownish streaks pointing transverse her Belly to the Pubes, which was deprived of hair; and excoriated; and there were some streaks on her left thigh. There was at hand some Apoplectick water, two spoonfulls whereof I poured into her, upon which she presently came to her self, and answered well to what was asked her. She complained of a great heat in her Throat, and of a pain in the part that was hurt. Half a drachm of *Pulvis Bezoarticus Anglicus* was presently given her in Chervil-water; after which she sweat well, and the heat in her Throat abated. Then an Ointment of Cream and White-lead was applied to the hurt place, whereby she found much ease: But because she continued something feverish, eight ounces of an Emulsion was given her, made of Seeds of White-popy, Columbine, Miller, and *Cardus Benedictus*, with 2 drachms of *Pulvis Bezoarticus Anglicus*, after which she was well, and the Fever ceased. The Cuticle was restored to the excoriated Breast by my *Emplastrum Diasaturni*.

Ab Herman. nus, mis. cur. an. 72. obs. 182.

II. If any bones be broke, the vulgar astringent Cataplasms must not be used, lest the evaporation of the venome be hindred, but another of Bean-flower, Lupines, Root of *Angelica*, Swallow-wort, Leaves of Rue, *Scordium*, Treacle; and it must be renewed every day, till the strength of the venome be conquered and dissipated. But a defensive must be applied above the place, lest the venomous vapours ascend by the Vessels to the Heart.

Sennertus

III. If an Eschar be made, it must be timely taken off with a Pen-knife, and such an Unguent applied; Take of powder of the Root of Swallow-wort, *Angelica*, each half an ounce, Leaves of Rue, *Scordium*, each 1 drachm, Treacle 2 drachms, Spirit of Treacle 3 drachms, Honey of Roses 2 drachms. Mix them. When the Ulcer is cleansed, this Sarcotick powder must be srowed on it; Take of Root of *Angelica*, Swallow-wort, each 1 ounce, Myrrhe, Mastich, Frankincense, Leaves of *Scordium*, each half an ounce, *Aloe Socotrina* 2 drachms; make a Powder, which must be wet with juice of true Tabacco and Sanicle. Make *Trochiscs*.

Herb.

A GUIDE TO The Practical Physician.

BOOK VII.

Of Diseases beginning with the Letter G.

Gangraena, Sphacelus, or, Gangrene, Mortification.

The Contents.

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Cautions about cutting off a hand, affected with a Cancer, not ulcerous. XXVII.
Medicines.

I. IN a Gangrene from afflux of blood and humours, as long as the fluxion continues, Defensatives are good. When it ceases, they may be omitted; that the innate heat may reach to the part affected. But if any beginning of corruption shew it self, we must proceed in the use of them, that the way may be stopt to Vapours, that are raised from putrefaction, and which go to the noble parts. In a Gangrene bred of a cold and moist intemperature, where no fluxion is, they are not proper, unless a mortification be at hand, to stop the Vapours. A Gangrene that is the product of a dry intemperature, and want of aliment, plainly excludes Defensatives; for they, by their astringion, straiten and stop the ways of the Spirits and of Nutrition. But if a mortification be at hand, they should not be rejected, that the coming of Vapours to the principal parts may be prevented. However, if it owe its original to a malignant matter bred in the body, and driven outwards, there is no room for them.

II. Whatever parts are taken with a Sphacelus, we must intercept the Vein, exulcerate and heal, Hipp. sect. 5. l. 2. Epid. That is, It can no otherwise be cured, than by intercepting a Vein and exulcerating a part. And he says, a Vein is intercepted, when that or those Veins, which carry blood to the gangrened part, are cut off in their way by cutting, burning or tying. By exulcerating he means deep scarification of the part. Therefore, when signs of a Gangrene begin to appear in a part, we must quickly make

make provision for the whole; and if any Vein seem swelled and black, it must be intercepted with a Cautey; and we must ulcerate the parts, that are then dying, with deep scarifications, or burn them; or partly exulcerate them, and apply eating Medicines to them, and partly burn them: But any thing less than these is useless in this Disease.

III. Narcoticks must not be applied, except in a little quantity and something corrected with hot things, to parts that are indisposed, swelled, and that are of an ill habit, or ready to gangrene, because of Incision made in them, or for any other reason, through excessive pain with Inflammation: For by violating the heat, that is but weak in the part affected, they promote a Gangrene, and at length an Inflammation.

IV. *De Vigo* adds Oil of Roses, Chamæmil and Spike to Plasters. But oily and fat things doe harm, by obstructing the Pores and hindring Perspiration.

¶ Abstain from Digestives, that *Pus* and Putrefaction may be resisted; though *Hildanus* uses his digestive Ointment, made with Oil of Roses, in a Gangrene speedily spreading all over the body.

V. Arsenick neither alone in Powder, as *Fallopian* teaches, nor mixt with *Unguentum Egyptiacum*, can safely be applied in a Gangrene: For *Galen* reckons it among things septicke, and such as have a burning faculty. Hear what *Avicenna* says, "It is a putrefactive Medicine, whose property it is, to corrupt the complexion of the spirit, which comes to the part, and the complexion of the moisture of that part with resolution, so as they are not proper to assimilate to the part. Indeed it proceeds not so far, as to burn it, and corrode and waste its moisture; but it leaves a corrupt moisture in it, in which it acts contrary to the natural moisture, wherefore it putrefies." And this is an instance for Arsenick. Now because a Gangrene is the beginning of Putrefaction, in the heat and moisture, things that act by such a quality, cannot be a Remedy. But if we must come to potential Cauteyries, use such as are made of a strong Lixivium of Vine ashes, and quick Lime. These ruptorie Medicines operate safely and quickly, and with little pain, scarce continuing for an hour: On the contrary, Arsenick torments a Man twenty four hours, yea, two days, with most grievous Symptoms.

VI. An actual Cautey, that is, a red hot Iron, is preferred in dignity to a potential one: 1. Because the action of the Fire is simple, void of all aliene quality, leaving onely an *Empyreuma* behind: In a potential one, especially in Arsenick, &c. there is a malignant quality. 2. The action of Fire is determined: but not of a potential Cautey. 3. Because of the efficacy of the Fire, it operates in a moment: A potential one slowly, wherefore in a Gangrene, which is an acute Disease, it is not proper. 4. In a Gangrene there is plenty of excrementitious humours, requiring a Medicine hot in the highest degree, such as a red hot Iron: But Arsenick, though it be hot, leaves a corruptive humidity after it, as *Avicenna* says. 5. The part labouring of a Gangrene, being weak and lax, requires a Strengthner and Dryer, wherein an actual Cautey excels. But not a potential one. 6. The operation of a potential one is slow and painfull, hence comes an afflux of humours: The pain caused by an actual one is momentary. It is condemned by *Vitruvius*, for this onely reason, because the Nerves are hurt and contracted by an actual Cautey: But an experienced Chirurgion will not commit such an error, who knows the difference between Nerves, Veins and Arteries: for these lye near the Skin, the Nerves lye deep. But though there were danger of some contraction, yet this should be preferred before certain Death. Yet in bilious Inflammations, which are hot and dry by

nature we must use an actual Cautey carefully, and never but on urgent occasions, for by an actual Cautey they are made more dry, and grow more malignant: But if Putrefaction come to such a height, and if the plenty of humours be drawn by the violence of the Pain, actual Cauteyries may be made use of. They are condemned also in a Gangrene, from an hot intemperature without fluxion, and in one that comes from drinels and want of Aliment; for great extenuation and drinels admits not of a drying Medicine, nor must it be used, unless Amputation of the Limb be necessary.

VII. Gangrenes, produced by an outward Inflammation or Refrigeration, are far more easily extinguished and cured, than when some venom bred in the body has been the spontaneous cause of them: For in these the humour never lies so much on the out parts either of it self, or forced thither by the strength of Nature, but it always leaves some root and infection of its malignity in the Vessels. The Knife will doe little good in them; for although after Amputation you strive to extinguish the reliques of the venom with Alexipharmacks, yet perhaps you may doe it to no purpose; because there is such a kind and individual propriety of venom latent in these cases. I think Fire ought to be preferred before the Knife in such a case. Yet if it happen, that the venomous matter be driven out by a strong Nature to any particular part, in this case Amputation is a safe Remedy. A thing, which I once observed at *Newenburgh*, in a young Maid, who, upon the coming out of the Small Pox, being sent by her hard-hearted Mistress to gather something in a Vineyard, in a cold season, her little finger of her right hand was gangrened the same day, and happily cut off, without any Symptome supervening. The event was far different, *An. 1675.* in the month of *August*, in a Boy eight years old, the Son of a Garrison Souldier, who being ill cured of the Small-pox, the venomous matter fell upon his Mouth, that is, his Tongue, Jaw and left Cheek; and a Mortification arising, his Teeth on that side fell out, and he died the fourth day.

VIII. As a Bridegroom and Bride were playing one with the other, she threw a Handkerchief with a Pin in it at her Husband, who was lean, and had very broad Veins, and she hit him so, that the Handkerchief hung by the Pin, which stuck into his hand. Within a few hours not onely a great pain arose, but his left hand was so much swelled, that the next day he went to a Chirurgion, who being affrighted at the violence of the dangerous and unusual Symptoms, desired that he might have me for his Adviser, and that I would join with him. I feel the Patient's hand, there was no mark of the prick of any Pin, all his hand to his very wrist being stiff and inflexible. I ask him, if he remembered in what part of his hand particularly he was prickt, and with his forefinger of his right hand he shewed me the place or region where the third bone of the *Metacarpium* bears up or sustains the ring-finger; which being very much swelled, when I tried to bend or extend it, good God, how he roared! In the mean time methought I saw a little mark of a Pin, like one of *Democritus* his Atoms, and indeed in that part of the hand where the ring-finger and the said bone of the *Metacarpium* are articulated; yet not in the very joint, but a little below it, whereabouts the bone and its *epiphysis* are joined together. All this time there was no sign of extravasated blood, but some discolouring, livid or rather a strange fugacious colour. Here was need of Advice and of present Remedy against an evil that threatened a Gangrene. Wherefore my Advice was this, that it was not convenient in this case to use Oil of Scorpions and such things, which some who were by did urge, but after large Bleeding (for the Patient was feverish and had large Veins) having forbid him all fat things, I ordered him a

K k

Decoc-

Vallesius,
Comm. in
locum.Zecchius,
conf. 20.Fab. Hilda-
nus.Hortensius,
Herc. Med.Hild. de
Gangrena.

S. Pauli
Digniff. de
febr. malign.
lib. 32.

Decoction partly anodyne, partly discutient, partly gratefull to the nervous parts, made of equal parts of French-wine and Wine-vinegar, of Flowers of Elder, and common odoriferous Chamæmil, with equal parts of Castor and Myrrhe, and a little Camphire, in which, being well strained and squeezed out, linen Cloths were wet and wrapt warm about the hand: After the use of which Fomentation, in the night following, all the Symptoms abated; and thus was an imminent Gangrene kept off.

Vallesius,
5. Epist.

IX. In malignant Inflammations and Gangrenes we must not expect late help onely from Remedies called Universals, although these ought to go before Topicks: but we must proceed immediately to cutting, burning and the greatest drying. Besides, we must consider, whether the matter be poisonous, for then we must abstain from purging, which might draw towards the Heart, unless it abound much in the body. And we must use Bleeding, which they that are so affected may endure, and Diaphoreticks, which must also be alexipharmack, and then we must endeavour to extirpate the Putrefaction in the part with the Knife, Fire and drying Medicines. For by this means, in time of Pestilence, many are saved.

Tulpius,
l. 3. obs. 48.

X. A. about seventy years old, was violently parched by a burning Fever, and the pestilential humour of the Disease poured it self with such violence into her left Arm, that in one night it was cast into an incurable Sphacelus from the setting of it on at the shoulder to the fingers ends. Do not therefore, O Chirurgion! inconsiderately cut such Arms, endeavouring either to recall the heat into the skin, or to make way for Medicines; for what is once mortified, can never be brought to life again. And although the Disease may sometimes seem to be at a stand, and to require the Pen-knife, yet the Strength being spent by the malignant Fever, and the part wholly spoiled, do not permit either the cutting or the cutting off a Limb infected in this manner. You might indeed hasten Death, but in the mean time you can doe the Patient no good. It were better therefore circumspectly to preface Death, and to prorogue it as long as you can, than to endeavour the saving of Life, when you are not able to doe it.

Fallopianus

XI. Some scarifie the dead flesh near the sound to the very bone, afterwards they strew Powder of Arsenick or Sublimate on the Wound: Or they put in Unguentum Egyptiacum fortified with Arsenick, that the dead part may be separated from the sound. But it is well known, what dire, and oftentimes dangerous Symptoms, Arsenick and Sublimate do sometimes cause, and therefore not to be used in the Cure of this Disease. Others burn what is corrupt with an actual Caustery till the Part feel pain: but how dangerous also this Caustization is, Fallopianus does shew. Others make Amputation of what is corrupt by Section, and that either with a Razor or a Saw, or a Modiolus, or a Hatchet: But how violent and cruel this operation is, (and therefore unbecoming a rational Chirurgion) and how destructive to the Sick, because of the great Symptoms which follow it, Hildanus, de Gan. & Sphacel. cap. 17. does shew. Instead hereof, ruptory Medicines, made of Vine-ashes and Quick-lime, do please me better. Butter of Antimony and Oil of Quick-lime are also as good: for they make a deep Eschar presently, and almost without any pain; and because they are endued with no malignant quality, they do not at all hurt the principal parts, as Arsenick does. And these must be applied near the sound part of the flesh, nor is scarification of the flesh necessary, for they are strong enough, and penetrate deep enough of themselves. But when the Eschar is made, we must not tarry for the falling of it, by the help of Nature or Medicines, but it must be removed or separated with a Razor, or some other proper Instrument.

Frid. Hofmannus, m.
m. l. 2. c. 2.

XII. Some now-a-days use to treat mortified Places slightly, as if they were simple Gatherings or Abscesses; which if they prick but in one place, so that the humour runs out a little, it serves their turns, and they will have this prevent all dangers, so that they engage, the Man will doe well. But I would have Mortifications treated with Excision, to the sound parts, which some either neglect or do not take notice of.

Severinus,
Med. off.
p. 112.

XIII. One broke both the bones of his right Leg in the middle, with a Wound, bleeding till he fainted, a Sphacelus supervening. The most Excellent Petrus de Marchettis, because of his weakness through excessive bleeding, would not cut it off; but by often applying red hot Irons he hindered the Putrefaction from spreading farther; in the mean time he took care of the Heart. At length, the Patient not knowing of it, he cut the dead part with a Razor, near the live part round about, which falling off, he consumed the rest of the Putrefaction with actual Causteries. To remove the Eschar he applied Unguentum Egyptiacum simplex. The Chirurgion, on the third day after he had cut his Patient, when he was complaining of a great Pain in the great Toe of his right Foot, smiled upon him, and told him, he wondred he should complain of a Pain in his great Toe; that had been buried three days. At which words the Patient was so terrified, that he fell into a Swoon. The Eschar being taken away, and the Muscles, after the usual manner, retracted upwards, the broken bones stood out four inches, which being every day covered with dry thread and a catagmatick Powder, were separated in two months time from the sound. Hence we may gather, that if the Patient's strength be so low, by reason of putrid Vapours, and an antecedent Flux of blood, that we are certain he would dye in the very Operation, then we must abstain from Cutting, because it is more excusable to leave the Patient, than knowingly to kill him. But if there be no hope of life, unless the part be separated, it is the Chirurgion's duty every day to touch the mortified part morning and evening with red hot Irons, that the putrid humours may be dried up, lest the Gangrene creep upwards, and he must give Cordials.

Scultetus,
Tab. 54.

XIV. If the Gangrene be above the Ankles, the Leg must be taken off near the Knee, for what is left is of no use; yea, it brings much inconvenience to the Patient, when he must use a wooden Leg, for the part hangs idle behind; besides, when it is cut in the tendinous part of the Muscles and fleshless part of the Leg, it makes the healing far more difficult. ¶ Section must be made in the sound flesh, yet near the mortified, about an inch from it, because we are not certain, that what is left will not multiply it self; yea, we must not trust the bone it self, which is under the flesh, that it is not corrupted in an higher place.

Van Horne,

XV. Yeast, which is taken off Beer five or six hours after it is warm, stops a Gangrene, according to the experiment of a Dutch Woman, who restored the natural colour to a Baker's Leg, which should have been cut off the next day, by applying Yeast on a Cloth to it, to the admiration of the Chirurgions; and by continuing the use of it for some days, she preserved the poor Man from all danger. I saw a Gangrene imminent from cold cured in our own Maid by Yeast of strong Beer. One had a Gangrene a whole night, and Amputation was resolved on. An Emperick coming in, fomented the part all night till the next day in Water, wherein Lime and white Chalk had been boiled. The next morning the Gangrene appeared quite taken away. ¶ Another Man was to have his Leg cut off for a Gangrene, after violent Pain and Inflammation. At the Persuasion of a Country-man he covered his whole Leg in wet Sand, it was often renewed, and the Patient was so relieved, that when the

T. Bartholinus, cent. 5.
hist. 41.

Riverius.

the Chirurgeons came, they found him cured. ¶ One had most grievous pains in his Leg, and it came to that pass, that the Skin grew black, so that it began to be gangrened, and the Physicians were considering about cutting it off: at length a Priest came in, and bathed the whole Leg, especially the place where it was black, with *Elizir*, or *Aqua vite Juliani*, and strewed upon it an equal part of powder of Myrrh and Aloes; and applied a Linen cloth wet in the said *Elizir* and powders, binding it with a broad Rowler. The Pain ceased, and in the part that was black, an Ulcer grew, out of which many pieces of bones were taken, and it was cured with these Medicines, though he drank Wine all the time of his cure. ¶ A Woman, after a tedious Disease, had a Gangrene in her Leg, which while it was yet beginning, was wholly taken away by a long fomentation with a vulnerary decoction of *Aristolochia rotunda*, *Rhaponticum*, Zedoary, Myrrh, Aloes and white Wine, adding to the colature *Aqua vite*, wherein Camphire was dissolved.

XVI. I have seen some, whose whole Limbs were corrupted in a Malignant Fever, whose condition was deplorable. If they were not cut, corruption quickly seized the other parts: If they were cut, it was Butchery, and they died afterwards. It is better to leave such uncured.

XVII. In this sort of *Aphæresis* we must take care, above all things, of the place of amputation. Many of the Moderns determine, this is convenient enough in the very joint, although in common practice almost every where the contrary is observed; both for the difficulty which occurs in the very section; for the place of the conjunction of two Bones cannot so readily be found; and because it cicatrizes very slowly, and with much difficulty.

XVIII. I would advise rational and faithfull Chirurgeons, in cutting off Hands and Fingers not to follow them (unless upon urgent necessity, as shall be said hereafter,) who place the Limb on a Bench, and applying a Knife or Ax, with the blow of a Hammer chop off flesh and Bones both at once. This operation is violent and cruel, unworthy of a Chirurgeon, and destructive to the Patient: For not onely the nervous and muscular parts are confused and mangled above measure in this operation, but also the Bones themselves are usually cloven to the very next articulation. Hence, though Bones have no sense, yet by reason of the *Periosteum*, most grievous pains, and other Symptoms, yea, and a new Gangrene will arise. Which things though all of them do not supervene; yet the Ulcer is not brought to a Cicatrice without extreme difficulty, because of the shivering and great contrition of the bones, which remain here and there in the muscular flesh, and stick for a time to the *Periosteum*: yet at length they are cast out by Nature by degrees. From these things it is manifest, how inept and dangerous the way of cutting off Limbs is, which *Leonardus Botallus l. de vulneribus Scelopetorum* propounds. Make two wooden Columns, says he, fix them in a ponderous joint, and let them be made hollow on the inside lengthway, each of them; in the lower side fix a broad Knife firmly, with its edge upwards; and let the moveable part have a Knife fastned in it with the edge the contrary way: When a Limb is to be cut off, the upper part loaden with Lead must be let fall from on high, or forced with a heavy blow, and it cuts off the Limb, flesh and bone at once. I saw an instance of ill success in a young man, who, when his hand was shattered with a Gunshot, committed himself to a Chirurgeon. The Chirurgeon laid his hand on a Bench, and set an Ax, wherewith Country men cleave wood, upon the part where the hand was to be cut off. Then he commanded the head of the Ax to be struck with a violent blow of a wooden Maul. The Hand indeed was cut off at one blow, and there came no grievous Symptoms at the beginning; but it was a long time, and

he was put to much pain before he was well: It was very difficult to close the Ulcer with a Cicatrice, because of abundance of broken and shattered bones, which created monthly troubles and new Symptoms to the Patient.

XIX. *G. Fabricius Hildanus* in his most learned tract *de Gangrena & Sphacelo*, c. 17. endeavours to prove by many reasons and authorities, that the dead part cannot quickly, safely and pleasantly be cut off, if any of the putrid part be left, to be washed with red hot Irons: Yet these reasons in my judgment do not convince, that amputation of a gangrened Limb, *Aquapendent's* way, does never succeed well, much less do they demonstrate that this way of *Aquapendent's* is worse than that which according to the Ancients is made in the live parts, considering that amputation of a gangrened Member cannot be pleasantly made in a sound place, whether the parts softer than the bone be cut with a Razor, or with a cauterizing Knife. Nor can it be done safely, because the sound and live part tied very strait, may easily dye. Yea, Section cannot be made in a sound part so carefully, but that sometimes the parts that are deeper and farther corrupted (than the external parts visible to the Eye) will be left. Which if it be done, either new Section must be made (which were horrible) or the reliques must be burnt with red hot Irons, *Aquapendent's* way. Not quickly, because a longer time is required to draw out the Arteries with Pliers, and tie them with thread, (and if the swathes be removed, sometimes such a Flux of blood follows, that unless the rest of the vessels be touched with an actual Cautery, it cannot be stoppt) than to burn the wound presently with actual Cauteries. Not to say, that the Operation is farther protracted, if after resection *Hildanus* and the Ancients way, any putrefaction remain, to be consumed with the said Cauteries. Wherefore being persuaded with these Reasons, and having had good experience of it, I reckon the cutting off of a mortified part according to *Padua* and *Aquapendent's* way (which is approved by *P. Salmuth. cent. 1. obs. 80.*) does not onely not come behind the old way of cutting, but should rather be preferred before the old.

XX. One was to have his Leg cut off, and the Chirurgeon was ready to doe his work; I dissuaded it, because the Body had not been prepared before. I would not be present at the operation, lest I should have seemed to have consented. Therefore I absent my self, and they cut off the Limb, and, as they think, doe the business well. Some Students came to me, who were there, and tell me the operation succeeded well. I bid them mark the third or fourth day. The third day in the morning the bands, through the violent force of the blood, were broken, and the vessels opened: And before the Chirurgeon could stop the bleeding, the Patient poured out his Life with his Blood.

XXI. Some before the operation give the Patient some Narcotick, that he may be less sensible of the pain. But we, according to *Guido's* Opinion, will abstain, because of the dangers that attend Narcotics. ¶ Some before the Amputation of a Limb, always give *Philonium Persicum*, for fear of an hæmorrhagy; and with success indeed, because it is a Narcotick: But it is known that *Philonium* does good onely for one day. Therefore it should be taken every day, which would be very detrimental. But it is best, according to *Hippocrates* his advice, to breathe a vein the third or fourth day.

XXII. Here I would advise young Chirurgeons, that while the Patient sleeps, a servant should watch with him continually, lest the Patient through false Imaginations, which sometimes come into his head, should move his Stump, and the Blood should burst out again. Which happened to one whose Arm I had cut off at the Elbow: He on the third day, in my absence, would reach out his Arm (which he thought

Hildanus de Gang. & Sphac. c. 17.

Salmuth. Cent. 1. obs. 80.

Hildanus de Gang. c. 19.

Salmuth. ibid.

Hildanus. was not cut off) to take something; a vein opened, and a violent Hæmorrhage followed, which killed him within a few days.

XXIII. After amputation is made, if the Hæmorrhage be great, (which yet, if a strong ligature be made, rarely happens; so that sometimes only a few spoonfulls come, or not above three or four ounces at most) some use an actual Caustery, to burn the vessels, and to make a crust on the Flesh. But it is to be feared, that when the crust falls off, a new Flux of blood may come, and before the Chirurgion can be called to stop it, the Patient may depart. Besides, *Paræus, lib. 12. cap. 35.* affirms, that great Pain and Convulsions are raised in this manner. Wherefore *cap. 31, and 33.* he advises to take hold of the vessels with Pliers to run a needle through them, and tie them fast with a thread. But *Gourmelinus, Syntagm. Artis Chirurg. p. 125.* for very good reason disapproves of this way: As we also do, with *Hildanus*, reject the method described by *Paræus, c. 32.* When he draws the flaps of the Skin together by running a needle and thread in 4 places, and drawing them together, and thus endeavours to cover the bone, that it may not be injured by the external Air. For what need is there to torment the Patient with such injuries, which will do no good? The cure is far more happily performed, if we make use of the fuz-ball, called *Crepitus Lupi*. That is, in the space betwixt the two bones we must apply pieces of it, full of Powders that stop blood, wet in Whites of Eggs; Yea, we may make of it scouped out, a kind of dish, and fill it with a stegnotick Powder, whereinto we may put the end of the Stump. Which dressing may be kept on by a defensive and glutinant Plaster, over all which a Beef's bladder may be applied (till the fear of Hæmorrhage be over) and at length a cruciate swathing may be made. ¶ In the mean time the heat of the blood must be stopt by *Laudanum Opiatum*. ¶ One was condemned to die, and when the Hangman, before he cut him into quarters, had cut off both his hands in the street where the House stood, in which he had done the villany, lest he should die of the large bleeding, he was by this means preserved from sudden Death. The Hangman's Wife took a live Cock, and opened it from the vent to the Breast-bone, and immediately thrust the stump into it, and then folding the Wings, tied it fast with a cord, and thus the violence of the Blood was stopt, so that it bled not for above an hour; and till he was executed, the Malefactor was no weaker for his dismembring. ¶ When a Horse had bit a Man's Finger off, and the blood, after several ways had been tried, could not be stopt, I ordered him to thrust the wound into a Chicken cut open near the vent, and to hold it there till it was cold; and the bleeding immediately stopt.

XXIV. Some Chirurgions use to leave the bandage on the upper part of the amputation till the second dressing, that the mouths of the vessels may be stopt, but they doe very ill: for it causes grievous and continual pain: Hence come Inflammations, Fevers, want of sleep, &c. For Pain draws the blood and humours violently to the part. For this reason, the first dressing, if it can any way be done, must be removed within two or three days at farthest. For the Swathes and Bladders, when they grow hard, cause pain.

XXV. Some at the beginning do so wrap up the stump in linen and flanel, that thereby to the Patient's great damage, it grows hot, and so draws the blood and humours thither.

XXVI. In abscission of the middle or ring Finger, if the corruption or Caries go so far, that abscission must necessarily be made at the third articulation or the *Os postbrachiale*, no small difficulty has hitherto arisen; and that because of the *Septum Digitorum*, (that is, that fleshy part, which lies between the

third and last joint of the Finger, towards the second joint (as you may see in *Fig. 2. c. 25. l. 1. Vesalii*, from the letter R. to D.) for the cutting of the Knife or Razor must be thrice repeated: The first Cut separates the finger in the last joint from the *metacarpus*; the second and third takes off the *Septum Digitorum* on either side of the finger. In this operation thrice repeated something carnosus or membranous may remain untouched by the Knife, and may render the operation more difficult and tedious. Now I, considering these things, contrived an Instrument whereby the finger may be cut off in the last joint, together with the *Septum* on either side, at one blow; and it is a very sharp and winged Knife, whose hind part is semicircular, and of a bigness proportionable to the finger to be cut off. And though before I disapproved of this way of chopping off Limbs, yet in this case, because it cannot otherwise be well done, of two evils we must chuse the less.

XXVII. A Hand affected with a Cancer not exulcerated is cut off in a sound place, that is, at the heads of the *radius* and *ulna* towards the Wrist. But we must take notice, to the end the blood yet infected, which the adjoining Vessels contain, may run out (for being retained it might affect the Arm) that neither the Arm must be tied with a rowler, above the place of Incision, nor must the foster parts be cut with a red hot Knife, which *Barbari. Scultetus.* call *Cauterium cultellare*.

Medicines especially made use of by eminent Physicians.

1. I have often seen this Cataplasim used with desired success in stopping of a Gangrene; Take of Meal of Beans, Lupines, each 4 ounces, Juice of Rue 2 ounces, or Powder of Rue 3 ounces. *Ozymel simplex* 6 ounces, Lie what is sufficient. Sometimes he adds powder of *Scordium*. Mix them. Make a Crato. Cataplasim.

2. Spirit of Salt, rightly prepared, applied to outward Gangrenes and Ulcers, is a high Narcotick Remedy without any pain. ¶ All the care consists in the efficacy and virtue of Spirit of Salt; for the Salt being saturated with this Liqueur, and dried, is reduced to its natural temper, which every one may see by experience; for every sharp and biting Salt, if it be dissolved in Spirit of Salt, is reduced to a wonderfull sweetness.

3. *Unguentum Egyptiacum* is a most excellent and principal Remedy for a Gangrene; it separates the dead flesh from the live, and breeds a laudable Eschar. *Gul. Fabri. cius.*

4. In the cure of a Gangrene, after the Eschar is removed, if not only Medicines, but the very Air, cause intolerable pain, this following is very familiar with me. I take Ointment of Betony made of the juice, to which I either add Oil of Sweet Almonds, if there be no inflammation, or if there be one, as there often is, I mix Oil of Roses or Yelks of Eggs, and I have never yet found any thing better. ¶ *Scordium* bruised, or the juice of it, is excellent: For experience shews, that dead bodies are preserved from putrefaction, if they either be stuffed with it, or wrapt in it. *Hieron. Fabricius.*

5. Take of Colts-foot 1 handfull and an half, Melilot, Mullein, Dwarf-Elder, each half an handfull. Frankincense, Litharge, each 2 drachms and an half, Mastick, Myrrh, each 1 drachm and an half, crude Alume 2 drachms. Mix them for a Decoction. When a Gangrene is feared in a Drop-Grembs, sic.

6. Let the part affected be washed with Spirit of Wine Camphorate, than which I think nothing is more proper for hindring the mortification of any Part.

7. I re-

J. Van. Horne.

Hoeferus.

Platerus, Obs. 1. 3. p. 772.

Idem, ibid.

Hildanus de Gangrena.

Idem.

7. I remember one was perfectly cured of a Gangrene in his thigh, after rotten Apples bruised had been applied in form of a Cataplasm, without the liquor, once or twice.

S. Pauli.

8. To bring a place to its natural colour again, Unguentum Egyptiacum, dissolved in Aqua vitæ, is most excellent.

Ranchinus.

9. I order the scarified places to be moistened with Spirit of Sulphur, where the flesh was mortified, then I order all the Arm to be fomented with Spirit of Wine hot, wherein Powder of Aloes and Myrrh were infused; then Powder of Aloes and Myrrh were strewed on the Arm in great quantity, and upon the Powder linen cloths, wet in Spirit of Wine, were applied, which Remedy being used a few hours, the Arm returned to its colour, to a miracle; the swelling abated, and the Gangrene was stopt.

Riverius.

10. Take of Cow's dung 1 pound, Oil of Roses 4 ounces, Vinegar 3 ounces, Saffron half a scruple. Mix them. Make a Plaster, which must be applied hot every three hours, I know by experience, it certainly cleanses and cures a Gangrene.

J. Dav. Ru-landus.

11. To prevent a Gangrene Sir Theodore de Mayerne of England used this following successfully, applied warm with cloths dipt in it: Take of the strongest Vinegar, red Wine, Spring-water, each a like quantity, Litharge of Gold well beaten 8 ounces, Roche Alum, Sea Salt, each 2 ounces, Gum Arabick, Myrrh, each 1 ounce, Olibanum, Mastick, each two ounces. When the Liquours are mixt, put in the Litharge, let them boil, stirring them continually, then add the Salt and Alum, then the Gum Arabick, and last of all the Powders, boil them to a consumption of a fourth part.

Phil. Jac. Sackius.

12. If it will not give way to gentle Medicines, we must use strong ones: Take of Mercury what you please, dissolve it in Aqua fortis, when it is dissolved, add to it of Sal Saturni, and Unguentum Rosatum Camphoratum, what is sufficient. Make an Unguent. ¶ This Liquour is very good, if cloths be dipt in it and applied: It was successfully used in a Gangrene of the Scrotum: Take of Vitriol 1 ounce, tops of Oak 1 handfull, Frankincense 1 ounce, Camphire two drachms, Wine 2 pounds and an half. Boil about a third away.

Sennertus.

Turnheuse-rius.

13. The Juice of the Herb Alexanders in Unguents stops Gangrenes wonderfully. It is a Secret.

14. Salt of Soot is made thus: Let Soot be powdered as fine as flower, dissolve it in Vinegar, let it settle to the bottom of the Vessel, separate the Vinegar, and dissolve it in other Vinegar, continuing it so five times, and you will find a Salt, which, if it be put in a moist place, will melt, and make a most excellent Oil for Gangrenes and malignant Ulcers.

Joh. Vigorius.

II. A Ganglion sometimes, when it is deeply radiated, hinders the motion of some joint; therefore some course must be taken with it betimes, which we do by premising convenient Evacuations, and applying emollients and digestives. But we must have a care, as much as may be, that no suppuration do follow here, because when it arises of it self, or is caused through carelessness, it brings with it perverse, and oftentimes incurable Ulcers, by which these nervous places are sometimes so corrupted, that the motion of that joint is oftentimes either lost or depraved.

Platerus.

III. In some places Ganglia are cured with the Knife, in others, as in the Feet and Hands, it is very dangerous to wound them with a Knife. Therefore Ammoniack, or some other Malackick, must be applied, that it may cover the whole Ganglion, a plate of Lead must be laid over it, and it must be tied on very strait, and so as that the Ganglion can slip no way. Some onely tie on a plate; and when in a few days they find it softened, when the Lead and Plaster is taken off, they set the right Thumb upon the Ganglion, and set their Fingers round about, and press it as hard as they are able, till they break it in pieces: This indeed was the old way, but now it is out of use. The present age does better, Men observe the membranaceous Stalk, the Glands and Branchings of the Veins, where the Ganglion rises, and whereby it is increased, they open a way by the Knife, they lay all bare, they tie the vessels with a thread, they turn aside the Nerves, they bind, dry, consume, burn and cut off the Stalk, Glands and Veins, whereby the Disease is sed, and that way as it were extirpate the root of the Disease, that new matter may not breed afterwards, and no new Ganglion may grow again. Although this way of cure is not without danger, if the Ganglion be great, and in a place where many great vessels and Nerves meet. Sometimes also the vessels underneath are corrupt and putrefied, great veins and arteries, which being laid bare, bleed excessively, so that no man can stop them, whereby the Patient is killed in a short time. Turpentine, quick Lime and Goose-grease, well tempered together, dissolve a Ganglion.

Hallerius.

Gibbosity, or, Crookedness in the Back.

The Contents.

The cure of one arising from an internal Cause. I.
The elevation of the depressed Vertebrae. II.
Gibbosity arising from some fault in the Muscles, not in the Bones, how it may be cured? III.
One following a Fever cured by dissolvents. IV.
The Spine restored by help of Iron Staves. V.

Ganglion, or, A glandulous Swelling.

The Contents.

We must have a care how we cut a Ganglion or Lupia. I.
It must not be brought to Suppuration. II.
The old and new way of Cure. III.

I. IF a Ganglion will not yield to Medicines, it must be cut out with a Knife, unless it be in the hands or in the feet, or there be danger of Nerves, Veins or Arteries, wherewith sometimes it is implicated. A Lupia also must be cut out, as a Gland, like as we did a few days ago, near the Jugulars, with good success.

Chalmers.

I. Gibbosity has its original from the Spine, when the vertebrae start outwards, or on one side, out of their natural place, to which sometimes an external cause, but most of all an internal cause gives occasion, especially when some pituitous humour is gathered thereabout. This humour must be removed by Oils and Plasters, that have a dissipating virtue, before the prominent part be reduced to its natural place, by an Iron Instrument fitted to any man's body. This reduction is performed not so much by pression, as by the emollient virtue of the Iron. This is the reason, why when the Patient is already cured, he must use a Stay for a year or two longer, that the soft Bones may not start out again.

II. Mr.

II. Mr. Ranchinus cured a luxation in the *Spina dorsi* in the Noble Lady N, which came from a Catarrh falling from her brain upon the Spine, whereby two *vertebrae* in the middle of the Spine were displaced. After Universals she used a Barbers Press, where he presses his Linen with a screw, she applied one board to her back, and another to her breast, but she left off the use of it, because the compression of her breast hindered her breathing. At length she used that Instrument, whereby they use to heave up Coaches, when they stick in some hollow place, (in French *un Grig*) on whose circular end they laid a piece of wood, to be fitted to the displaced *vertebra*, putting a linen cloth between: The other end of the Instrument was set against the Wall, then the Patient was held fast about her Shoulders; afterwards the instrument was forced gently, till she could bear the pain no longer, at which time she desisted. This was done twice a day, and so the Luxation was cured by degrees.

Riverius.

III. A Nobleman of a tall stature, about 40 years old, was so crooked, that all who met him, might well have taken him for one of Ninety, rather than one of that age. He went to several, who make it their profession, either to restore dislocated parts, or to reduce such as are misshapen to a due figure, but all to no purpose. The man was very much troubled, and as he was curious to get a remedy for his indisposition, among others he came to me. This evil conformation of his Body seemed to arise not so much from any fault in the bones, as from his Muscles being loaden with ill humours. While therefore I was preparing and purging the humours, and applied such fomentations, as I thought proper for his Disease, he began, not beyond some hopes, but far sooner than I expected, in six weeks time, to be so well, that he could carry his tall body upright. This observation may serve for admonition, that Anatomy do not deceive the unwary, while they think that all external deformity takes its original from some bone distorted inwardly.

Kerckerlingus, Obs. Anat. 45.

IV. In the year 1668. I saw a bending and a distortion of the whole Spine, from top to bottom, in a Boy and a Girl, caused by humours settling there after a Fever. Chirurgeons were sent for, they attempted restitution by Machines and Steel Stays. I, contrary to the Chirurgeons mind, restored them perfectly by dissolvents and Strengtheners, the humour being dissolved, that filled the Muscles and Ligaments, and driven back by *Metathesis*, it not as yet being fully settled there.

V. I shewed the way for a certain Nobleman's Child, that was crooked in his back, whose Spine stood very much out, how in his Infancy they might make Iron Stays, such as armed Men wear, made of thin plates, and covered inside and outside with Cloth, for him to wear. Which being done, when he had worn it about a years time, night and day, and was so used to it, that he found no trouble in it, by degrees his crookedness was pressed in, and the Spine came to its natural straightness: So that afterwards he always went upright, and grew a very tall man.

Platerus, Obs. l. i. p. 164.

Gonorrhœa, Pollutio nocturna, or, Running of the Reins, and nocturnal Pollution.

The Contents.

The Cause lies not always in the Genitals. I.
The Cure must be varied according to the variety of Causes. II.
The distinction of Seed from Pus and Phlegm. III.
A virulent one must never be cured by Astringents. IV.
The use of Astringents is oft times hurtfull. V.
It must not be stopt rashly. VI.
Things that extinguish Seed are not always proper. VII.
In a virulent one bloud must be let in the foot. VIII.
In a spurious one Hydreticks are more powerfull than Diureticks. IX.
A virulent one is sometimes stopt by immoderate Venus. X.
A Woman's, caused by abundance of Seed, must be provoked, not stopt. XI.
A quicker emission of the Seed, because of an Ulcer in the Intestinum rectum. XII.
The diversity of things that diminish Seed. XIII.
External Agents are most efficacious of Lead. XIV.
Diureticks are sometimes good. XV.
Medicines must be varied according to the constitution. XVI.
All such Medicines are not convenient for all persons. XVII.
We must have a care they doe no hurt. XVIII.
Whether Mercurials doe good? XIX.
Oils and Unguents outwardly doe little good. XX.
The noxious abuse of Tinctura Martis Antiphthifica. XXI.
Sylvius his way of curing a virulent Gonorrhœa. XXII.
Medicines.

I. *Rondeletius*, cap. 57. writes, that it is difficult to cure a *Gonorrhœa*, unless the cause be known; and he adds, that he knew a Nobleman, who after a cold Imposthume in his Kidneys, was long ill of this Disease, and was always much worse, when he used things to extinguish seed, whether cold or hot: That he ordered him a quite contrary course of Diet, and bid him drink generous Wine, and eat good drying Food, which was not windy, by which means he was cured. And the Cause of such *Gonorrhœa*'s is not always wholly in the Genitals, but sometimes in other parts, or in the whole body: Wherefore he also advises, to give such things as correct the crudity of the Stomach.

Sennertus.

II. There is a threefold division of a *Gonorrhœa* not sufficiently considered by *Galen* nor by other Physicians. There are men, who through the heat of the Kidneys, Liver and seminal Vessels, breed abundance of hot Seed, whom it often provokes to excretion in a dream. This kind (to which both Sexes are obnoxious) if it be excessive, does pine away the Body to a Consumption. Another sort of *Gonorrhœa* is produced by putrefaction of abundance of Phlegm, either salt or crude, which is often mixt with a little Seed, and especially from the Brain, by the *Spina dorsi*, Loins and Kidneys, and also from the Liver by the Veins, and by the Nerves which come to the *pubenda* from all parts of the Body, and by the seminal Vessels and *Cremasteres* joined with the Stones, to the *uterus* and *Penis*, from whence it drops by degrees, not without excoriation of the parts: The matter of this is crude bloud mixt with impure humours, the sink whereof does not, as some think, run to the Bladder, but to the Womb and *Penis*, and by the passage of the sperm is voided into the *Penis*. The running of these humours both before and after the *Menfes*, (for in the beginning, the ebullition in the bloud then being high, they run plentifully, though in the middle of the time they do not stop in some.) The Greeks call it a *Gonorrhœa* in both

both Sexes, but the Latins, in Women call it *Menstrua pituitosa*, of which *Hippocrates*, 1 de M. Mul. speaks. But I would have you well remember what he tells us, 2 de morbis. "Unless, saith he, after the defluxion of a Catarrh and Seed from the head by the *Spina dors*, which some feel to creep down like Ants, you purge the Head and whole Body well, the Patient will pine away, and die of a Consumption, which they call the Back Consumption. They that would cure both kinds of Gonorrhœa with the same Remedies, are mistaken: For cooling and astringent things, by reason of the weakness of the Vessels, and because they dry up Seed, are good for the first, which are plainly hurtfull for this second: For it stands not in need of things that astringe and thicken with cold; but because of Crudity and Putrefaction of Humours, it indicates its removal by vomit or stool; by which method I have cured several with purging and a spare Diet. The third sort of Gonorrhœa comes from the venereal Disease, and is called virulent; in which at the beginning a sort of white and yellowish matter dribbles away insensibly, waking as well as sleeping, from the seminal Vessels. And this sort cannot better be cured than by a decoction of *Guaiaicum*, or anointing with Quick-silver.

J. Langius, Ep. 5. lib. 2.

III. Let young Physicians observe what is taken notice of by few Practitioners, that Seed, Pus and Phlegm, although they shew all alike white in the Urine, yet by a skilfull man they may thus easily be discerned. The Seed, when it is separated from the rest, swims constantly at the top, nor will it sink, though it be shaken, no not in a Gonorrhœa. Pus and Phlegm do both sink to the bottom: but at the least shake Pus flies in funder, so as it cannot be discerned, onely it makes the Urine white as Milk. Phlegm rolls about. Purulent matter parts a little, and rolls about a little, but both of them, when the Urine stands still, presently sink to the bottom, the Seed always swimming, unless it have contracted a great putrefaction from its virulence: For when it putrefies, the Air being evaporated and consumed by extraneous heat, it must of necessity grow heavier, and therefore sink to the bottom, and when it is shaken, stick to it.

Ab. Heers, Obs. 18.

IV. A Gonorrhœa is commonly reckoned by all men, a Disease caused by some fault in the spermatick Vessels. But *Veslingius* his judgment is truer, who reckons it rather an Ulcer of the Prostate, voiding not so much Seed, as *Sanies* and affluent, corrupt humours: Which the plenty of matter sufficiently shews, oftentimes exceeding a Quart; and the smell and colour shew it to be something else than Seed, especially when it has continued any time. There lived a Man at Padua, who was ill of such a Gonorrhœa for thirty years. Besides, the very substance of the matter, that is mixt with the Urine, represents something different from Seed, because it sinks to the bottom: but it is the Nature of Seed to swim at the top, and when the Urine is shaken, not to part asunder. Yea the cutting open of dead bodies often proves it, whereby such Ulcers are found in the Prostate that we can scarce doubt any farther of the matter. See *Rondeletius Pract. l. 2. c. 9.* and *Palmarius 2. de Lue c. 9.* *Camillus Thomajus, Meth. Cur. c. 57.* thought that a Flux which lasted Months and Years in a Woman without weakning the body, ought not to be called a Gonorrhœa, but a catarrhal Flux. Nor did *Veslingius* much differ, when he often commended to us, as the onely scope of a right cure, to absterge and dry rather than to bind. Therefore he, to the benefit of many, did successfully use Conserve of Mallows, and a decoction of Marshmallows with Turpentine and Powder of Rhabarb. I saw such a Gonorrhœa cured at Padua by giving *Bolus*'s of Cassia with Turpentine and *Mercurius dulcis*, prepared according to art:

as also Emulsions of Hemp seed, and other cooling things, with Spirit of Turpentine: With cleansing injections of Whey with white precipitate, continued for four days: Lastly, an Electuary made of old Treacle, extract of Juniper, *Confectio Hyacinthi* and *Crocus Martis*. Nor did *G. Harduynus de S. Jacobi*, commend the decoction of the root of *Statice* (it is a kind of Mountain Giliflower) for any one intention more than for that of drying.

Veslingius, Obs. 67.

V. We must not stop a Gonorrhœa rashly, nor presently, or at a venture; for it has been often seen, that they who have endeavoured to stop such Gonorrhœa's unseasonably and violently, especially before the Body has been purged of its filth, have had Buboës, Inflammations of their Stones, and have been troubled with pains in their Kidneys and Loins, and with a thousand other afflictions. Wherefore before we put our helping hand to the part affected, we must provide for the whole Body, lest some such thing, or worse, befall us. The best way therefore of cure is that which cuts off every Cause, beginning with the most prevalent.

Mercator.

VI. Concerning the cure of that which is said to be caused by watry and thin Seed, we must carefully observe, whether it be true Seed that comes away, although it be watry, thin and crude, or whether, as *Langius, lib. 2. ep. 5.* takes notice, it be corrupt and vitious humours, which being gathered in the Body, flow to the Genital parts, and are voided by the passage, whereby Seed is usually cast out: as sometimes vitious humours, gathered in the Body, use to be evacuated by the Womb, which they call the Whites. In the first case we must use such things as incrassate Seed, make it firm, and detain it. In the second we must not use incrassating and astringent things, but evacuators, correcters of Cacoehymy, and a good Diet. Therefore *Langius, l. c.* says, "I can safely swear, I have cured several onely by purging *Sennerthus*, and a spare Diet."

VII. Sometimes it is caused through abundance of Wind, gathering of crudities, want of sleep, or eating windy things: If you endeavour to stop this with Medicines that extinguish Seed, you will make it much worse, because such sort of Medicines are exceeding cold, whereby the intemperature, which is the cause of the Gonorrhœa, is increased.

Rondeletius.

VIII. The Seat of a virulent Gonorrhœa is in the Prostate and the *Vesiculae seminales*, which if it be unseasonably stoppt, the virulence is communicated to the whole Body, or it flows back to the Stones, and there causes a Tumour, or if it extend to the perineum, unless it be timely repelled, it causes an Abscess, and erodes the Urethra. It is not safe to let blood in the Arm, if the heat in these parts be gentle, and without a Fever: Blood must rather be let in the Foot, because the *Saphena* arises near the Groin, and imparts two branches to these parts, and therefore large blood-letting does make powerfull revulsion, when Buboës break out. Few or none besides *Palmarius* and *Fallopianus*, let blood in the Arm, which is suspected, for fear of the Venereal Disease, through a reflux of the virulence into the bowels and habit of the Body.

Riolanus.

IX. Now a days some reckon the matter must be purged from the whole, yea, and diverted to the ways of Urine, perhaps after *Galen*'s example, who a long time after Hydragogues, used Diureticks with success; and therefore some give Turpentine washed in Mallow water, with Powder of Liquorice. But in my practice I never found any good from Diureticks: Nor do I give Turpentine, except in Contractions and Convulsions of the Vessels and the Penis. Wherefore I have seen the cure succeed happily, by deriving the matter to the Ambit of the Body by Diureticks and Sweats, with the help of some proper decoction.

Fortis.

X. Im-

X. Immoderate *Venus* is commended, as indeed it has done good to some, the venomous infection being poured out with the Seed, while it has not as yet penetrated deep into the substance of the similar parts, yet because it draws the humours from all places into the parts affected, and causes an Inflammation, it must be omitted.

Enchir. Med.
Pract.

XI. If a Woman's Womb by continual coition be full of Seed, she does not conceive, till the Womb unburthen it self, which stagnating there a long time, hence sometimes *mola* arise, the Drophe, Wind and Flux of the Womb, like Women's Whites, which yet it is not. Nor is it a *Gonorrhœa*, which if Women once suffer, they are ever afterwards barren, all remedies proving to no purpose. This excretion is known, for a cold matter comes away without pain and emaciation of the body. Moreover this Flux must not be suppressed, but rather provoked.

Panarolus.

XII. One came to *Spaw* to get a Remedy for his impotency, because he let go his Seed at the first touch of the *Labia*; but it was watrish and very like Whey. Because this happened in a sound body, and I could imagine no other cause, I told him, I thought he had an Ulcer in his *intestinum rectum*, therefore the vessels necessary for the preparation and ejaculation of Seed, being affected with a putrid vapour, did breed Seed which was insufficient for a long tension of the *Penis*, and for a brisk coition. Then I ordered a suppository onely of Honey, and it was drawn out again besmeared with much thick Pus. Then a Chirurgion was called, who with his middle Finger found a great and deep Ulcer. To whom when Medicines were applied, that manifestly did him good, he went his way, and neglected the cure.

Feers, Obs.
Med. 10.

XIII. Things that abate Seed, or Antivenereals, either diminish the product of Seed, not so much by subtracting the quantity of Aliment (which indeed makes much for the diminution of *Venus*), as by hindring the gathering of Seed, or by constriction, wherefore Saturnines inwardly have the first place, especially *Saccharum Saturni* made by Evaporation, which by its intense sweetness stimulates the Tongue, but in truth by the parts of the distilled Vinegar, joined with the metallick ones, it does as it were centre the *Serum* (for in my judgment Seed is the finest cream of the *Serum*) so that it cannot grow turgid, or reach to the genital parts, but weakly, wherefore given in plenty it emasculates and binds: And for this reason *Tinctura Saturnina*, vulgarly called *Antiphthisica*, may by better right be called *Styptica* and *Antivenerea*. And by dissipating and destroying the Semiform consistency, procuring a diffusion of the Spirits, such especially are Camphorates, and bitter things, as Absynthiacks and Aloeticks, have partly some respect hither, so *Vitex* and leaves of Rue, &c. Or they take off the Stimulation, Orgasm and Acrimony: Such especially are watry things, Coolers, as Water Lily, Lettuce, Purslain, Emulsions, &c. For as the heat of the Kidneys, or of the blood rather, and the vigour of the *Serum* make much for the separation of the Seed in the Pampiniform passages and Pores, so things which dilute and temper the heat, breed a less vigorous Seed: Therefore Drunkards, who drown their Bodies with too much drink, are unfit for Generation. And earthy things, which precipitate, and abate the motion of the Blood, and consequently of the Seed, so among Vegetables, Strawberry and Agrimony, &c. *Terra sigillata*, Coral, Bole Armenick, *Os Sepie*, which, and its Magistery, is not amiss made use of for curing a *Gonorrhœa*, all the Saunders, &c. And acids, which obtund the vivid Sulphur of the Blood, and are also apt to hinder the glutinous consistency of the Seed. Therefore all acids are commended. So I have observed that *Hepaticum rubrum*, or *Crystalli tartari vitriolati* and *Santalati*, have

done much good in abating nocturnal pollutions. One by the constant use of Spirit of Vitriol, whereby he endeavoured to correct the weakness of his Stomach, had his *puendum* and *testes* shrunk up and extenuated. And Nitrous and Mercurial things, in as much as they make the Seed fluid, so nitrous things in general, which also invert the Sulphur. Thus one in *Timew*, who was extreme libidinous, at length by taking a large dose of Nitre, ceased to be such. But beside this, Mercurials intimately possess an acid Salt, rendering the *Serum* and Seed fluid, exhaust the Nerves for business, and are apt to weaken the muscous and nervous parts; therefore *Mercurius dulcis* is highly commended in a *Gonorrhœa* simple and virulent. Or finally, Middling things, which are apt to correct the motion of the *Serum* and Fluxions, and so they moderate the Afflux, mitigate the Acrimony, by their balsamick virtue keep the consistence entire, and strengthen the feminal Vessels, cleanse them when ulcerate, lax and virose, and divert them another way, such indeed as are proper for Catarrhs in general, or for any known Fluxions of the *Serum*, to wit, Succinates; wherefore I have observed that such diverting things, for Example, Essence of Amber, joined with the Bezardick Anodyne, has very happily cured a *Gonorrhœa*. Whither pertain also Sudorificks of the Woods, &c. For we must take notice that the class of such things as abate Seed, has a great latitude, they cause chastity, they are proper for the Faults, Fluxions and Ichorefcency of the Seed; wherefore they are convenient, chosen with judgment, in all *Gonorrhœa's*, nocturnal Pollution, simple and virulent, in rampant Lust, yea, and for Women troubled with the Whites.

Wedelius,
de f. m. fac.
p. 225.

XIV. Of the aforesaid things many applied outwardly conduce to temper the heat; so leaves of Vine, Willows, *Agnus Castus* use to be applied outwardly, leaves of Water-Lily, which yet are of the lowest rank. Saturnines deserve to be remembered here before all others, which as inwardly they are adverse to *Venus*, so outwardly they contribute much to the same end; hence plates of Lead are usual, not onely by reason of their native Coldness, whereby they repell and allay, but also because they extract the saline Acrimony as it were magnetically, which we may gather from hence, because every part affected under this leaden cover, uses to be moist, in which sweat the sharp Salt increasing, the heat goes out continually, and by its Acrimony endeavouring to dissolve the *Saturn*, it visibly sticks thereto; which plentiful attraction of Salt is made by benefit of the *Mercury*, wherewith *Saturn* abounds. Now *Mercury* does entirely love the company of the Salt, and so it procures Exhalation, and having first made an actual refrigeration, it causes a potential one.

XV. A certain Doctor of this City cures a virulent *Gonorrhœa* successfully with *Cantharides*, which he steeps in Rhenish Wine, giving the infusion tempered with some other Liqueur: but because in the beginning he could not go on with the cure, without great torment and exulceration of the Bladder, at length he mixt it with Oil of sweet Almonds, *Syrupus Fernelii*, and juice of Mullen, and so in three days sweetly removes the Disease by plentifull Urine. ¶ I have in another place commended an Infusion of *Cantharides* for a virulent *Gonorrhœa* and difficulty of Urine, the happy success whereof I have tried more than once. But we must observe, that the *Cantharides*, lest they do hurt, must be used whole. And when we make a Veficatory, the extremities may be taken off, wherein there is a more gentle faculty, which may be kept for this infusion, to purge by Urine. If this infusion be ordered in due manner, it pro-

M. J. Mat-
thial ad
T. Barth.
Cent. 4.
Ep. 55.

T. Barth.
Ep. 54.
out

out exulceration or torment, so that there is no need of fat things.

XVI. The virtue of things that diminish Seed varies according to the different Constitutions; for as every Agent in general acts according to the manner of its reception, so when Contraries occur in Authours, for example, that *Agnus Castus*, Rue, Mint, do diminish *Venus*, and provoke it, do abate Seed and produce it, these Effects must be ascribed to the difference of Bodies. So green Mint increaseth *Venus*, dry abates it.

Wedelius.

XVII. This same virtue of theirs is different according to the state of the Seed, and as simple wasting of it, or astriction is indicated, for all things are not convenient for all Persons. Thus in nocturnal Pollutions cooling acids, watry and gentle styptick things are proper. In a simple *Gonorrhœa* acid and nitrous things; for lixivals, whatever Practitioners deliver to the contrary, must rather be avoided. In a virulent one Mercurial ones in the beginning; but acids and nitrous things are not so good: Nitrous things are potent in abating Lust, but they must not be made use of in the Flux. The middling things are better for the Flux, than when it is stop.

Idem.

XVIII. In diminishing of Seed we must have a care we run not into the other extreme or contrary. Therefore in general Absynthiacks, Saturnines, and other things which we have reckoned up, are not so proper for new married Persons, that is, in a large quantity; and in young People we must have a care how we meddle with them, especially for such as are troubled with nocturnal Pollutions. Nocturnal Pollution is a Disease of that age, wherefore the Seed and its Organ should be checkt, and its acrimony may be abated, but it ought not to be extinguished. I knew an old Man of Seventy, of a hot Constitution, who had been troubled with nocturnal Pollutions from his Youth to his extreme Old age, and nevertheless he was blest with a numerous Issue.

Idem.

XIX. Mercurials rather increase the Flux of Seed than check it, that is, of themselves they make the Seed more fluid; wherefore we observe, that after the use of them, and giving of Purges, the flux of Seed is always as it were increased. How proper therefore however it be in the beginning for a *Gonorrhœa*, either virulent or simple, given with a Purgative, that is, *Mercurius dulcis*, yet this is done for the sake of absterfion, mundification and diversion, rather than for astriction. Wherefore it is conveniently given in such a manner, as that the Ulcer of the *vesicæ seminales*, which arises of acrimony contracted from impure Coition, may be cleansed, and fitted for consolidation, so that he who would proceed with these things alone, and exhaust the matter, would labour in vain. For then, that is, when these things have been already used, strengtheners, of Agrimony, Strawberry, Succinates, and the like, which makes the lax parts firm, mitigate the acrimony, and stop the fluidity, may commodiously be subjoined.

XX. We must not rely on external Oils and Unguents, for wasting and checking of Seed: For these very things make the tone of the genital parts more lax, and so rather promote than stop the Flux. Wherefore *Unguentum Ros. Mesues*, *refrigerans*, *Galeui*, Oil of Henbane, and other Oils which are usually commended, have indeed sometimes their place, especially anointed on the Loins; but it is better to insist on internals than these. Nor will you doe any good by anointing the Stones therewith; to say nothing that Oils heat the Parts.

Idem.

XXI. *Tinctura vitrioli Martis Saturnifata* commonly called *Antiphthisica*, according to my experience, succeeds well, if, in a moist way *Acetum stillatum Saturnifatum*, or that which has contracted a saturated sweetness from the *Minium*, be poured upon *vitriolum Martis*, either powdered or whole: Or, in a dry way, if Vinegar and Spirit of Wine be poured on *vitriolum Martis* and *Saccharum Saturni*, each a like quantity, and mixt together. Patients that are ill of nocturnal Pollutions, do usually, after taking of this Tincture, especially in a large and continued dose, lose their Appetite.

XXII. When onely a virulent *Gonorrhœa* afflicts a Patient, and the mass of blood is not as yet infected, the Cure must be applied onely to the *Gonorrhœa*. But when the mischief has crept farther, and has infected the whole mass of blood, then the universal cure must be premised, at least joined with it. And a rational cure of a *Gonorrhœa* will be insisted on, if we consider, that it follows an Ulcer in the *Prostate* and *vesicula seminalis*. For although I do not deny, that onely a debility in those parts, does often remain after too much coition, and breeds a *Gonorrhœa*, of many years continuance; yet no *Gonorrhœa* will ever be virulent, unless beside the Seed, the blood also, that comes for the nutrition of those parts, do corrupt into a sharp and virulent humour, such as is usually voided in a Venereal *Gonorrhœa*, therefore called virulent. And that which so corrupts both the Seed and Blood, will more or less corrupt the containing part also; and therefore will at length raise some sort of Ulcer in it: Since therefore there can be no other part that contains the virous matter, besides the *Prostate*, and the *vesicula seminalis*, they may deservedly be said, either one or both of them, to labour of an Ulcer. A thing that must never be passed by, when we insist upon the cure of this Symptome, which will never be happily performed, unless the Ulcer be removed, and the Disease which this Symptome follows. Therefore in the dogmatical cure of a virulent *Gonorrhœa*, we must think of cleansing and healing again of the Ulcer, and of correcting or removing its cause. The cause of this Ulcer is a sharp and virulent humour, communicated in Coition, sticking about these spermatick Vessels, corrupting the Blood and Seed, and after the Afflux of it when corrupted, remaining in part in the solid and containing parts, and by the corruption of the new affluent matter perpetuating both the Ulcer and the virulent Flux. He therefore will, according to art, and successfully, cure a virulent *Gonorrhœa*, who first corrects that virulent and sharp Ferment, which caused and maintains the Ulcer, and corrupts the Seed and Blood; or, who wholly discharges the Body of it. Secondly, who cleanses and heals the Ulcer produced by it. And all the Medicines that are vulgarly commended in the cure of a virulent *Gonorrhœa*, do answer these few indications, as he will easily observe, that considers all these things with an attentive mind; although few, when they are about the Cure, do sufficiently observe all these things, wherefore no wonder, if so often the cure succeeds either not at all, or but very slowly. Divers Emulsions, which are commonly used in this case, correct the sharp and virulent Humour, and Decoctions, which they call emollient and lenient, being made of *Liquorilli*, Barley, &c. Turpentine it self, and its Oil, Balsam of Peru, *Oleum de Copiva*, &c. 2. The same Decoctions, in a manner, Emulsions, Oils and *Cantharides*, &c. do void the same sharp and virulent humour by the way of Urine, while being endued with a Diuretick faculty, they discharge

charge that virulent ferment together with the Urine. And if any Man will but with an attentive mind consider all these things, he will easily find, they are good to temper and expell an acid and sharp humour, and therefore that a virulent *Gonorrhœa* depends upon, and is produced by such a humour, as we have proved it from all the Symptoms of the Pox, and now do confirm it by Medicines that are proper for the Cure of this *Gonorrhœa*, and such as are found so onely by Experience. Certainly all things which powerfully alter or correct the humour in a virulent *Gonorrhœa*, are either Aromatics, or at least do more or less temper an Acid, among which, Crabs Eyes do not come in the last place, very necessary and usefull in curing of this Disease. The method therefore of Cure consists partly in alteration and tempering of a sharp humour, that breeds and maintains the Ulcer in the Spermatick Vessels and Glands, and partly in the Expulsion of the same with the Urine, when it is more or less contempered, as by the next and commodious way: For which purpose also sudorifick Decoctions, commended in the general Cure of the Pox, may be used, because they do not onely expell the peccant humours by Urine, but they also temper the sharp and acid. Partly in cleansing the Ulcer, and then in consolidation of it, both by Turpentine wash, and by it boiled, and by its Oil, and by Balsam of Peru, *Oleum de Copiva*, several sorts of Balsam of Sulphur, &c. Partly in strengthening of the same Glands, *Prostate* and *vesicula seminales*, that are weakened with this malignant Flux, by gentle Astringents and Aromatics, things endowed at least with a fixt Salt, which destroys an Acid, Castor, Amber, Myrrh, Mastick, Coral, Bloud-Stone, *Lacca*, &c. to be taken inwardly: and such like things, to wit, Oil of Mastick, and other things to be applied outwardly to the *Perinaeum*. And in such a Method a virulent *Gonorrhœa* will be cured successfully, which, if neglected, or not well observed, sometimes it is rendred in a manner incurable, and especially by reason of the part extremely weakened with a long Flux.

Sylvius de
le Boë, App.
Tr. 3. Sect.
332, seq.

Medicines especially made use of by eminent Physicians.

1. This is very famous both for them that lose their Seed walking, and in their sleep; Take of Seed of Willow seven drachms, Calamint six drachms; Seed of white *Vitex* five drachms, Rue half an ounce, Hemlock Seed two drachms. Make it with water into Trochisks. Give the quantity of a Hazle-nut in five ounces of *Posca*.

Ætius.

2. Among noble Confections this is reckoned most effectual; Take of Pine Nuts, first washed in water, Pistachio Nuts, Seed of Cucurbit, Cucurbit, Raisins, each half an ounce, Cinamon, Mace, Seed of Anise, *Agnus Castus*, each one ounce, Camphire one drachm. Make it with Sugar.

Alex. Benedictus.

3. This Confection wonderfully helps a *Gonorrhœa*; Take of Seeds of Melon two ounces, Cucurbit one ounce, *Agnus Castus* half an ounce, *Acacia*, Coral, each one drachm, *Been*, white and red, each two scruples. With Sugar make a Confection, the dose half an ounce, with three ounces of Plantain-water.

Rod. à Castro.

4. This is singular good for a *Gonorrhœa*; Take of Gum-arabick, Tragacanth, Carabe, Mummy,

Bole Armenick, the mandible of a Pike, each what is sufficient, and with Syrup of dried Roses, or Myrtle. Make Pills of one scruple in weight. At the first time let him take three Pills, and then Crato. one for several days.

5. I commend this for strengthening of the parts; Take of the whole Mastick Tree, with the Bark, cut very small, one ounce and an half. Infuse it in six pounds of Water, add of juice of Lemons depurated three ounces. Digest them in *Balneo* twenty four hours. The Dose is Rod. à Font. six ounces in the morning for several days together.

6. One was cured of a *Gonorrhœa* onely with this Apozeme; Take of Root of Comfrey half an ounce, Plantain, Horse-tail, Daisie, Knot-grass, each one handfull, Sorel one handfull and an half, Seed of Plantain one drachm, Sorel, Mallow, each half an ounce, red Rose Flowers one pugil, Raisins half an ounce, scraped Liquorice three drachms. Boil them in a sufficient quantity of Water. To the Colature add of Syrup of Purflain, Myrtle, each one ounce and an half. Forestus. Mix them. Make an Apozeme for three doses in the morning.

7. If in a virulent *Gonorrhœa* the parts be inflamed and pained, a Cataplasim of Leaves of Rue and Dwarf Elder, boiled in Vinegar and applied is a present Remedy.

8. Powder of Ivory presently cures a *Gonorrhœa*, whether Gallick, or Legitimate, and other Women's Diseases. C. C. de Heredia.

9. Natural Bathes, which have an astringent Sennertus. faculty, are here very good; or artificial ones, which have the same virtue.

10. I frequently use juice of Citron and Lemon with great success, because it conduces much to extinguish Seed. Oil of Henbane, if a Woman's Loins and her *Loci* be anointed therewith, is commended outwardly, and has often been experienced by me. Mercurialis.

11. Purging premised; Take of Wall-Rue one handfull, bruise it, and with a little Flower and one Egg bake it on a Tile into a Cake, yet without Oil and Butter, let the Woman eat this Cake in the morning two days, and her *Gonorrhœa* will presently be stopt.

12. This is an approved Remedy; Take of dried Mint three drachms, Seed of *Agnus Castus*, Root of *Iris*, Seed of Rue, each one drachm, Seed of Lettuce two drachms and an half, white Sugar one ounce. Mix them. Make a Powder. Joh. Zechias. The Dose half an ounce with Chalybeate water, for a Woman's *Gonorrhœa*.

Gurgulionis Affectus, or, Diseases of the Uvula.

The Contents.

The applying of Powders to it, when swelled, sometimes does harm. I.
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Medicines.

I. We

I. WE must have a care, when the Body is impure, or the part affected is troubled with an Inflammation and Afflux of Humours, that we do not use hot and eroding Medicines; as also if there be any Malignant Quality, bred of an atrabilious humour, or which favours of a Cancer: For Cancrous Ulcers are exasperated and irritated by eroding Medicines. In such I shall rather apply a Medicine made of albes of Crabs with their *Menstruum*. The Wife of N. after riding in the hot Sun, was taken with a defluxion upon her Uvula and Jaws. A Barber Chirurgion was called, who, when he found the Uvula swollen, he blew in a very sharp, hot Powder, three or four times a day. Hereupon an Inflammation and a very dangerous abscess arising, not onely the Uvula, but also the Cartilages of the Nose were eroded, and Ulcers broke out here and there in the Face. When the Matron's Uvula, by reason of the Catarrh, was relaxed and inflamed, and *Aqua Regia* had been indelicately applied, a great Inflammation there followed, with danger of Life: A most dangerous Quinsy followed upon applying Powder of long Pepper and Saffron to the Throat and Jaws.

II. But if it degenerate into the form of a Grape, and you see the Uvula grow narrow upwards, then you must not use Coolers and Restrictants any more, but you must endeavour with moderate Dissolvents, as with a Gargarism onely of hot water, or wherein a little Fennigreek and Fenil has been boiled, and it must be touched with a *Spatula*, strewed with fine Powder of Pepper, Cummin and Fenil. Nor need we fear Pepper in this place, for it is often used alone with good success, when the Uvula is inflamed. For which reason, the vulgar dare say, relying on this Argument, that Pepper is potentially cold, supposing that hot things are onely expelled by cold, not knowing that the chief Cure of Inflammations is to be performed by hot things, dissolving that which sticks to the Part.

III. It must not immediately be cut off, as the stalk begins to grow pale and small; but scarifications must be tried first, which usually give present relief to parts that are almost dead, for a Gangrene will never mortify any part, if they be applied in time. But in this case the Uvula is falling, or already fallen, into a Gangrene, and why should you fear to scarify that, in hopes of restitution, which you are resolved to cut off?

IV. Abscession must not be made over precipitately, if the cure can be performed by any other means, because sometimes by taking it away, either the Voice is hurt, or a Consumption follows, or a bleeding is raised, which cannot easily be stopt. But before it be cut off, we must see what the figure and colour of it is. For it must not be touched, if it be round in its lower part, and slender above, hanging as it were by a stalk: Or, if it be very red, and as it were bloody, that is, speckled with drops of blood, or if it cause pain: For if such an one be touched, it easily turns to a *Carcinoma*. On the contrary, if it be small and long, and not very red, but whitish, in the lower part, it may safely be cut off; yet so, as that onely what is preternaturally eminent may be cut off. Not long since I saw a Chirurgion press the *Columella* with an Instrument, called a Crow's Bill, the Patient's Mouth being opened very wide, then with the other hand he clipped off that part of the *Columella* which was below the Instrument, and no pain, no Inflammation or Hemorrhage followed upon it.

V. A Priest had an Imposthume in his Uvula; another Priest clipped off his whole Uvula with a pair of Scissors, which being cut off, and the Patient's Body being very plethorick, the blood and humours fell in such a quantity on the Breast, and so great a straitness of Breast and Lungs followed, that the Patient could scarce breathe, and finally he could neither spit, nor raise from his Breast, and the third day he was choaked and died.

VI. Although Gargarisms ought to be the same in the relaxation of the Uvula, as in Ulcers of the Gums and Jaws, in the beginning astringent and repellent, afterwards resolvent and exsiccant; yet where no inflammation is, the use of Powders is more effectual, for so the astringent and drying is more powerfull.

Medicines especially made use of by eminent Physicians.

I. For falling down of the Uvula.

1. Take green Nuts and Date-stones, and when you have a mind burn them sufficiently, and take equal parts of them, and powder them dry. You may use them so: They are very discutient.

2. This is an excellent Plaster, if Bayberries, Penniroyal, wild Marjoram, Horse-mint and Savine be bruised and boiled in Honey, and applied to the Head shaven.

3. I have often tried this Powder does excell most Medicines: Take of Pepper, Cinnamon, each half a scruple, Bark of Frankincense-Tree, Galls, each 1 scruple, red Roses 2 drachms. Make a Powder, wherewith the Uvula must be touched.

4. Let the Kernels of Walnuts be beaten with Spirit of Wine, and applied to the Coronal Suture.

5. For Children, a clean Paper four times double, wet in equal parts of the Mother's Milk and Rue water, applied to the Crown of the Head, is good.

6. For a loose Uvula to dry up the humidity, this is a certain experiment, if a little Saffron be put in Man's Urine, and one gargle with it.

7. If the matter be small, and the Head not very full of Excrements, it is cured onely by touching it with long Pepper. It is beaten very fine, and the end of the Uvula is touched with it, which being touched twice or thrice, they spit Phlegm, and it is quickly contracted and made shorter.

8. For the falling of the Uvula. Take long Pepper, Ginger, each half a drachm, Granes of Paradise 1 drachm, Pellitory of Spain, Alume, each half a drachm, *Album Græcum* 2 drachms. Mix them. Make a Powder which raises the Uvula.

9. Hemp-seed boiled a little in *Possa*, strained and used for a Gargarism, scarce ever fails.

10. Water of Spleenwort is admirable in a sore Throat.

11. An excellent Powder is made of *Album Græcum* dried, mixt with other things, if it be applied to a lax *Columella*.

II. For Exulceration and Inflammation.

1. This is an excellent Medicine for an Inflammation of the Uvula, both in the beginning and in the height: Take of *Rhus Culinarium* 1 ounce, Flowers of Roses half an ounce, Saffron half a drachm,

Hildanus,
Ceni. 6.
Obs. 15.

Botallus,
l. de Catar-
rho, c. 8.
Sect. 16.

Idem, ibid.

Exbir. Med.
Præf.

Alex. Benedi-
ctus.

Codronchius.

Crato.

Johnstonus.

Kunrad.

Rondeletius.

Rufandus.

Stöckerus.

Weikardus.

Æcius.

drachm, bruise them and powder them. Take half a Spoonfull of this, and dissolve it in three ounces of Water and Honey, and make a Gargarism.

Cortilio.

2. Some reckon this as a secret, and believe me, in Ulcers of the Tongue, Mouth and *uvula*, it does wonders: Take of common water two ounces and an half, Powder of Sublimate half a drachm. Let them boil till the Sublimate be melted, and strain it, wherewith touch the ulcerated places Morning and Evening.

3. This is a most generous Decoction to stop the Defluxion; Take Galls, *Rhus Culinarium*, and *coriarius*, Fruits of both the Tamarisks, Flowers and Rind of Pomegranate: All, or any one of these boiled in Water, may be given to gargle Nicol. Piso. withall.

4. I have tried this: Take of Pepper half a drachm, Powder of Venetian Orrice 2 drachms, Juice of Liquorice 1 drachm and an half, Sugar-candy 2 drachms, Honey 1 ounce. Mix them. Rondeletius. Make a Lohoch, and lick it.

A

A GUIDE TO The Practical Physician.

BOOK VIII.

Of Diseases beginning with the Letter H.

Habitus Corporis vitia, Cutanei Affectus;
or, Diseases of the Habit of the Body,
Diseases of the Skin.

(See Scabies BOOK XVI. and Cosmetica, BOOK XIX.)

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I. A Peculiar Republick and Regiment is constituted for the habit of the Body, it has also its Diseases, not depending upon the interior regiment; Hippocrates and Galen call it, *ἰσχυρὸν τὸ σῶμα*, or, The bulk of the whole body. The Arteries and Veins, that reach to the Muscles and Skin, belong to it. A cutaneous Itch often arises, when the Bowels offend not at all, which also is

cured onely with externals. It happens also, that a Scabies ferina infects the Skin, while the Arteries run dreadfull putrefaction, and administer matter to it, as they carry impure feculencies with the blood, and they not being received nor carried back by the Veins, are left in the Pores.

II. Hippocrates lib. de Humor. although he order Revulsion in an opposite part; does yet except the Humours poured out into the Skin, which he forbids to be drawn inwards, because the inner parts are more noble than the outer: Besides, because humours once poured out to the Skin, get a bad quality, so that if they once go inwards, they ever prove pernicious. Let Physicians have this rule before their eyes, while they are upon the cure of Diseases, that infect the outer Skin, that they let not blood in such a quantity, as to make revulsion to the inner parts, lest perhaps it happen, as it did to reverend N. who labouring of the Itch, would have 4 pounds of blood taken from him, by opening a Vein: Upon which, that very day, revulsion of the putrid humour being made from the Skin to the greater Veins, by Venæ-section, he was taken with a Malignant fever, which killed him on the fifth day. For in such Diseases I do not let blood, or in a very small quantity, both for the reason above-said, or because a Cacoehymie prevails rather than a Plethory.

III. A certain Physician cured grievous Itches successfully, which were despaired of by others, onely by giving a powder made of equal parts of Sassa, Rheubarb and Senna, in Broth, for 40 days; and anointing the body onely with *Unguentum de saccis*. For such Diseases being near of kin to the Pox, do, in a manner, require the same cure, as formerly J. B. Montanus did advise. Others commend the like powders; as N. Massa, p. 1. Ep. 30. does also commend decoctions of Purgatives, mixt with uctorificks, whom others do follow; though *Rondeletius* *Sennertus*

Rollinacius,
Diff. vi.
Anat. p.
1283.

Marrastus,
con. in chi
loc.

Sennertus and *Chalmetaus* disapprove of such Medicines, who never used them, because they are inconvenient and dangerous, by reason of contrary motions; which *Ballonius* reckons may be compared to purging in the Dog-days, *l. 1. Epidem. p. 41.* Yet experience shews they are usefull.

Vellechius,
Obs. 84.

IV. A Boy ten years old was afflicted with the Itch, which ouzed out an ichorous matter: A cold season coming on, it was suppressed, and the filthy matter was turned upon the Lungs, which caused a horrible *Asthma*, which ceased immediately, as the Wind turned to the South.

Pachequus
ad Riverium
obs. 53.

V. *Galen 14. meth. c. 17.* speaking of the Ringworm, says, that if but a little excrement be repelled to a principal part, it does no little harm; because this is dissolved by the bowels, speaking there of a Roman Matron's Ringworm, which would never have been cured by a Medicine of Sea wrack, had not *Galen*, by stealth, put a little Scammony in her Whey, which she drank: The reason was, because there was a great fluxion to the Part. Repellents therefore, before evacuation of the Excrement, always doe harm, except in a case where it is but small.

Sanctorius
de Remed.
Inv. c. 15.

VI. Leeches did a Melancholick woman a great deal of good in a *St. Anthony's Fire*, which ate her Leg, by drawing the hot and adust blood from the next veins, which, till then, did constantly supply the stubborn Sore. And the blood being voided, what remained was easily cured by Bread soaked in Water only.

Tulpius,
l. 4. obs. 13.

VII. One, by reason of heat in his Liver, was a little troubled with Pimples in his Face; who, being about to Marry a second time, drove them in with some Medicines: A little while after he was taken with the Gout, then with a Pallie in both his Arms, and in a short time he died.

Ph. Salmuth,
cent. 2. obs.
35.

VIII. Sometimes redness of the Face comes from abundance of blood, that is carried by the great vein, which is in the middle of the Forehead, and flushes on a sudden all over the Face, and strikes in again, but presently returns. An Illustrious Countess lent for me on this account, and while she was discoursing with me, the Blood immediately flushed out of that vein all over her Face. I observing that great vein in her Forehead to be full of blood, persuaded her to let it be opened. I ordered her hair to be shaven a little above the *commissura coronalis*, upon the vein, leaving a little hair on her brow, under the shaven place, that it might not disfigure her face, and I ordered a ruptory Medicine to be applied to the vein in the shaven place, and I told the Chirurgion, that he should not let it lye on above one hour, but he let it lye on two, and when it was removed it bloudied all the Chirurgion's face, the effusion was so violent; who ought to have pressed the vein from her Nose to the Wound, that the blood, which was in that part, might have been evacuated, and then should have applied a defensative upon the place. But he being affrighted, immediately stopt the Wound, and bound it, and the blood, which was in the foresaid place, fell down to the Nose, which swelled upon it, but was cured by applying a Plaster. When the Wound was cured, and the Vein, that was absconded, stopt, she was free, and her flushings vanished.

Bayrus,
Præf. l. 7. c.
2.

IX. Whether are *Spaw*-waters good for a red Face, and for pimpled and copper-nosed Drunkards? I Answer, Because these Pimples, or Pustules, do for the most part depend upon immoderate heat of the Liver; and these Waters do greatly heat the Liver, as is evident in Hydropicks, Cachecticks, and such as labour of the Suppression of the *Menstrua*, whose Liver is acknowledged to be cold, and we have seen abundance of people cured by heating it with these Waters; it is certain, that if any Man drink these Waters any considerable time, he will go away from the *Spaw* with a far redder and more Pimpled Face, than when he came

thither, as I have observed in several. But because these Pimpled Drunkards do always, in a manner, from the adusion of their Blood in the Liver, contract an obstruction of the *Melaraick* vessels, sometimes more, sometimes less, they may safely drink the *Spaw*-waters about ten days; namely, that when the obstruction is removed by these opening Wells, the Liver may be reduced to its temper by the help of cold things.

Heer, p. m.
156.

X. Our business must be to carry off by the Centre; for to drive out the excrementitious humours of the whole Body to the circumference, by Hydroticks, in a particular, not an universal cutaneous Disease, does appear to me not very proper. For the crusty affection, which seizes a peculiar and ignoble part, may become universal all the body over.

Fortis.

XI. There are two constitutions of Diseases, one whose essence subsists *in facto*, not depending any more on a preceding cause: From this, as also from the procatartick cause, no indication for remedies can be taken, because it is vanished. Another, whose Being depends upon the generation of a preceding and efficient cause: As the venom communicated by the bite of a mad Dog, and diffused all over the habit of the body, lies hid a long time, till it have infected the nature of the Heart and Bowels, then the canine madness quickly shews it self in the Hydrophobous. In like manner the impurity of the menstruous blood, of which the bowels of the *Embryo* are concrete, that the *fatus* may be nourished with the purer part of it, lies hid several years within the bowels, till by its contagion and ebullition with the blood, it produce the Small Pox and Measles. Hence it is manifest, that those Diseases, whose Being does not any more depend upon a preceding cause, and whose matter does not any farther lye deep in the body, mixt with the blood in the heart and veins, but is entirely cast out to the external habit of the body, by the strength of Nature, neither stand in need of Purging nor Bleeding, unless some portion of the Matter, or disposition contrary to Nature, do still remain in the body. Wherefore, *Hippocrates 1. aph. 20.* advised well. Things that have had a *Crisis*, and that have had a good *Crisis*, we must neither meddle nor make with them, either by Purges, or by irritating them any other way, but we must let them alone. And we find these entire excretions of the noxious humour, do, for the most part, happen in such Diseases, as arise with an ebullition of the blood, such as a Fever with *Buboes*, an *Ephemera*, the Sweating Sickness, *St. Anthony's Fire*, and children's *Exanthemata*. And it is manifest, that this ebullition is made in the blood, as in Juices and new Wine, by reason of watry and crude, or putrid Excrements. For since three kinds of Excrements are contained in the Juices of all natural things; one Earthy, which in Wine is the Lees; another Aërial, which answers to the flower or top of the Wine; the third, Watry and crude, which fermenting by time and heat, causes an ebullition in the humours and juices. Thus, since Children's bowels are nourished by, and concrete of the Mothers blood, which, because of Womens idle living, and the weakness of their heat, is more watry and less concocted than it should; Who is there, that does not think, the tender body of the Child must be infected with the contagion and filth of it, and that it must abound with superfluities? Which things, when they grow hot in the mass of blood, or in the heart, with a febrile heat, then Nature, like working Muff, throws off these dregs to the external parts of the body, where they become *Exanthemata*. Thus also the blood in the Liver or Veins, fermenting, with the Putrefaction of either Choler, expells its filth to the ambit of the body, whence come *Buboes* in the Groin, and *Erysipelata*, *Serpigines*, Carbuncles and Inflammations in other parts. And when

when the Body by a *Crisis* is perfectly purged of noxious humours, which the Urine, the *Serum* of the blood, being made like to healthy peoples urine, does indicate; then it were needless for us to purge the blood, either by bleeding, or a purgative Medicine, but the said *exanthemata*, relics and symptoms, might then rather be easily cured by outward remedies, or fomentations. Like as in that long Plague, which raged at Rome in Galen's time, "In those, saith he, *Lib. 5. Meth.* who were to escape death, black Pustules, which they call *exanthemata*, broke out thick all over the body: And it was clear to any one that saw it, that this was the relics of the blood, which had putrefied in the Fever, which Nature had cast out to the skin like ashes; But, saith he, there was no need of Medicines for such *exanthemata*, because they went away of themselves. Thus also I have above an hundred times seen an Itch, and *odemata* in the Legs, that have risen after a *Crisis* of other Fevers, but especially of Quartane-Agues, go away of themselves, without any help of Medicines. But if then either blood had been let, or a Purge given, there had been great danger, lest by those veins, whereby the matter of the disease had been driven out, it might have been drawn back again to the inner bowels: For a hungry Stomach can fetch back the Aliment transmitted to the bowels and limbs, by the same ways, and can draw other humours out of the bowels into its cavity. But since this foul asperity of the Skin, vulgarly called the Itch, does arise of impure chole-ric blood, or adust or *sæculent*, mixt with the liquor of salt Phlegm (such as the Liver produces through its dyscrasie, or often of meats and drinks of a bad juice) which Nature does not throw off all at once, but by degrees, with the Aliment of the body, without any ebullition of the blood, to the parts of the body, and infects and alters them with its contagion, whence it comes to pass, that the successive regeneration of it depends not onely upon the dyscrasie of the Liver, as upon an internal antecedent cause, but oftentimes upon an obstruction of the Spleen, whose office it is to purge the blood, and upon the contagion of the Parts; Therefore here it is necessary, not onely that the blood be purged, by opening a Vein, and giving purging Physick frequently, but also that the intemperature of the Liver, and obstruction of the Spleen be corrected and opened: And then, after the Body has thus been well purged, it will be worth the while, to dry the habit of the Body, also with Sudorifick Potions of Treacle, or Sulphureous Baths, or with Ointments made of Mercury; and so you may rid the outer parts of the Plague of this infection, which they had taken. And seeing the Pustules and Itch of a new Pox have commonly a great affinity with other *Exanthemata*, which the remedies common to them both do argue; and since, beside the external causes of contagion, both of them depend upon the internal infection and filth of the corrupt blood and humours; Who, I pray, even after the Pustules are driven out to the *Superficies* of the body, will deny, that evacuation of blood, by Phlebotomy and Purging, is of great moment in the cure of either of them?

XII. *Angelica N.* had been several years troubled with blackness in her fingers, with a little corruption and parting of the Nails. She was of a cold constitution, heavy and dull. The blackness was taken away by Tobacco smoak, and Ointment thereof, for that year: But when it returned the next, it was quite taken away with a fume of Cinnabor; so that it never came again.

XIII. Sometimes Sweating of the Feet does miserably torment Women, which they endeavour to stop: For which Disease I can easily tell them a speedy remedy; namely, if they put some powder of Myrtle in their Linen Socks. But let them have a care they do not fall into worse diseases, as I have

often seen. This excretion preserves from many Diseases, and should rather be promoted than checked. ¶ A Noble German, following the Count of the most Serene Prince, advised with a Physician about the sweating and stinking of his Feet. The Physician orders him to wear Socks dipt in Red-wine, wherein Alume was dissolved, and prescribes him Pills of Aloes and other things, and an Electuary of drying and diaphoretick Medicines, which might keep the body safe from putrefaction and superfluous humidity. The Socks gave great and present help; for the Soles of his Feet were so thick, that no sweat could get out afterwards: But the Pills and Electuary did not answer the Physician's end; In a few Months some small faintings and unusual giddiness followed. The Count of the most Serene Prince came to Geneva in the year 1674, and he desired a remedy of me for these troublesome and dangerous Symptoms. This Noble person was not against such things as might reduce him to his former state. Universals premised, two Issues were made in his Legs: His Feet were washed for a Month in a *Lixivium* made of deterfives and softners: He walked much, and by these means his former *effluviu* being recalled, his dreadful Symptoms ceased.

XIV. Vulgar Physicians debar every contumacious pain, that afflicts any part of the body, without inflammation, the help of bleeding; because, as they say, these Diseases come of a cold cause falling from the brain; To which cause they subject not onely the said pains, but also all Chronical Coughs, concerning all which things, the Physicians think they have satisfied their enquiring Patients, when they have told them, that the remedy proposed can by no means be convenient for them, but they must onely purge and keep a low diet, and such things. But that both the Physicians and Patients are deceived, the thing it self and examples do shew. Mr. de Varennes 75 years old, had a continual lingring pain in his neck and shoulders for many Months, which the Physicians endeavoured to cure by giving of Purges, and applying hot Ointments: By which, when he found small benefit, I told him, I thought Bleeding would doe him good; He on the contrary objected, that he never used to be let blood, that he was old, the Winter was beginning, that the Disease came of cold humours and wind. But he was forced at last, by the increase and continuance of his illness to admit of Blood-letting. I ordered 10 ounces of blood to be taken out of the Arm on the side affected: And in a few days a like quantity on the opposite side, with great benefit; and then again out of the other, and so he was cured. Yet in the mean time we did not neglect the use of Purgatives, and hot and discutient Unguents. In such another contumacious pain in the neck, with a heaviness of his head; when the Physicians endeavoured in vain to cure the Reverend N. by Purging and other remedies, I cured him, by thrice bleeding him a pound and an half at a time, contrary to the expectation and consent of other Physicians. Therefore, in cold Diseases, or such as we think to be cold, to abstain from bleeding is not always good, but sometimes hurtfull. And in contumacious Diseases (although they come of cold matter) it is not the part of a prudent Physician utterly to abstain, or to bleed less than is proper: Seeing it is certain, that every part of the body is nourished by that matter which is in the veins, which the colder and thicker it is, the Disease caused by that matter must needs be rendred more grievous and contumacious. Which matter, we say, ought partly to be abated by bleeding, and partly by purging and a thin diet, to the end that when the mass of blood is purged and renewed, the Disease may be cured.

Hæmoptysis,

Langius, Ep.
15 & 16. lib.
1.

Severinus,
Med. eff. p.
159.

D. Panarolus,
Pent.
3. Ol. f. 16.

Botallus, l.
de curat. per
S. M. c. 126.

Hæmoptysis, or, Spitting of Blood.

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Heurnius,
 l. de morb.
 Pet. c. 6.

I. **T**His is a dangerous Diſeaſe, for the poſſeſſion of life, the blood, is waſted: Wherefore here is need of a ſpeedy and ſtrong remedy, ſuch is Venæſection. Galen let blood in a young Man, who, having got cold in his Breſt, ſpate blood. Aretæus is of the ſame judgment; "If, ſaith he, the veins be diſtended with blood, one must be opened in every profuſion of blood, whether the blood come by breaking or eroſion. It is good alſo when rarefaction is the cauſe, left a Vein be broken with the Abundance. "Yet if, ſaith he, the Patient be lean, and ſcarce of blood, do not open a Vein. Trallianus alſo prudently adviſes; "We must by all means, ſaith he, bleed in the Arm: But when they ſpit out blood by eroſion, avoid bleeding, for ſuch Mens bodies are dry, and inclinable to a conſumption.

II. Galen. 5. meth. c. 8. opens the inner vein of the Arm, and he opens it again the next day. Trallianus, l. 7. c. 1. ſays, He did more good by bleeding in the Foot than in the Arm; becauſe the revulſion is ſtronger. Meſue and Avicenna, for prevention, open the Saphena; for the cure, a vein in the Arm, and they doe well: For when the matter is fallen upon the Breſt, and is ſtill plentifully falling, ſo that an inflammation may be feared, a vein opened in the Foot brings help too ſlowly, therefore we must bleed in the Arm. If the blood come from the Liver, we must bleed in the right Arm, according to Archigenes: If from the ſwollen Spleen, in the left Salvatella, as alſo in the ſame,

if it come from the Breſt and Lungs without violence. But in Women, we must have reſpect to the Menſtrua, the freedom whereof bleſſes them with many conveniences. And here we must uſe diſtinction. When it comes at the ſet time, it is good, and it is ſcarce raiſed at another, if the Menſes be at hand in a hæmoproick Woman, be they ſuppreſſed or not, bleed in the Saphena: So the Phyſician, Nature's Servant, will help her, by drawing the blood to the Womb; whither belongs Aphor. 5. 32. If the time of the Menſtrua be aſar off, there is need of diſtinction, for if there be ſigns of blood being gathered about the Womb, and it does not as then fall with violence upon the Breſt, let blood in the Foot. If it fall with great violence on the Lungs; and beſides, if abundance of blood be contained in the veins of the Womb, the upper and the lower veins both must be opened. But when the flux of the Menſes is at a diſtance, a vein must firſt be opened in the Arm, which being opened, will give preſent relief, and cannot be expected from bleeding in the Foot.

Sennertus.

III. Hippocrates, lib. de Humor. ſays, there are three things that hinder blood letting in them that ſpit blood; The time of the year, a Pleuriſie and Bile. For a Man might think that blood might be ſafely let as often as the Spitte appears bloody, ſince thereby it appears, that the Diſeaſe comes of blood, and that a tranſmutation is not as yet made, which ſhould hinder bleeding. The firſt impediment is in the Summer ſeaſon, at which time the Ancients abſtained from letting of blood for ſeveral reaſons, but eſpecially becauſe the blood at that time is thinnest, and next to a bilious humour: Wherefore ſince it is yet farther attenuated by bleeding, there is danger, left by continuance of the Summer's heat, all the blood be turned into bilious juice. Moreover, at that time Men's bodies evaporate, and waſte much with the ambient heat, ſo that they ſcarce ſeem able to bear bleeding. And if it may be feared in all Diſeaſes, much more may we fear it in this: For ſince it is very likely, at that time the fault of the blood conſiſts, not in the great quantity, but in the bad quality, which makes it thin and ſharp, its excretion muſt of neceſſity be increaſed rather than diminished, if it be farther attenuated by letting of blood. Which reaſons indeed, the more they prevail, while Bile has dominion in the body (which was the ſecond impediment) ſo much leſs ought blood to be let; not onely in ſpitting of blood, but alſo in any other Diſeaſe, that has its original from Bile, or takes a Man, who abounds with Bilious juice, ſo that it is no wonder, if Hippocrates never durſt open a Vein in Bilious Perſons.

Martianus,
 comm. in cist.
 locum.

IV. If ſtrength or age admit not of Bleeding, let Cupping-glaſſes be applied to the buttocks, loins (if blood do not proceed from the lower parts) or to the hypochondria, not to the breſt. If from the womb, to the lower parts. They that apply Cupping-glaſſes to the liver or ſpleen without Scarification, ſometimes doe their Patients good, ſometimes harm. For if a Vein have been broken in thoſe parts by a blow or a fall, and Nature caſt the blood out thence by the mouth or noſe, if you hinder it, you will cauſe a great inflammation in the bowels. But if a Veſſel were onely opened, and not broken or eroded, then Cupping-glaſſes may ſafely be applied.

Heurnius.

V. In Spitting of blood, which is cauſed by ſalt Phlegm falling from the head, a Cautery may be made in the coronal ſuture. I do not approve of it in the Arm, for ſo the matter might be drawn down from the head.

Bernardinus
 Paternus.

VI. When Women ſpit blood, Avicenna, lib. 3. ſen. 10. tr. 3. c. 6. orders the menſes to be provoked: The blood, ſaith he, is inclined downwards in Women, by provoking the menſes in their hour. But he muſt be underſtood of that provoking of the menſes, which

which is caused by means of frictions of the lower parts, applying of Cupping glasses, and Bleeding in the *Saphena*, not of that which is caused by taking internal Medicines. For otherwise he would contradict himself, because he forbids such Patients menagogues, with which the blood grows hot and thin, ferments, and is rendered sharper.

VII. *Hippocrates*, 6. *Epid.* sect. 3. l. 44. says, the Season of the year, a Pleurisie, Bile, are each of them an impediment in them that spit blood. *Galen* expounds it, as if these three things hindered Bleeding, namely, the Season of the year, because near the Dog-days we abstain from Blood-letting: Bile, because Venæsection is naught for bilious persons: A Pleurisie, because if this and Spitting of blood be complicated, blood must be let according to the rules of a Pleurisie, not according to the rules of Blood-letting. But this exposition is erroneous; for we both let Men blood in the Dog-days, and when they are choleric: And, besides, are not many Hæmorrhagies wholsome in Summer time? And grant, that Bile is enraged by letting blood, this may only serve to caution us, that, where Bile offends, we let blood sparingly. Upon account of the Pleurisie a Vein may be opened on either side, without any lett, and we may cure the Spitting of blood aright. *Vallesius* is in the right, who understands this Impediment not to hinder Bleeding, but the Cure simply: As if *Hippocrates* should have said, When any one is ill of Spitting of blood, the Season of the year, either very hot or very cold, is an Impediment, that he cannot so well be cured; because an excess of either Season, heat or cold increases Spitting of blood, Cold breaks, Heat makes lax. Then Bile requires the taking of Purgatives, which are aperient and irritating. And, lastly, a Pleurisie cannot otherwise be cured, than by expectoration, and nothing is better for Spitting of blood than quietness of the breast: And *Galen* himself acknowledges as much, 1. *Aphorism.* 16. Spitting of blood, saith he, and a Pleurisie, stand in need of a contrary Cure. Moreover, where as Spitting of blood is caused either by *Anastomosis*, or by *Diæresis*, or by *Diabrosis*, or by *Diapedesis*, these 3 Impediments hinder the Cure of them all. First, a hot time of the year hurts an *Anastomosis*, as also it may hurt the Flux, which comes by *Diapedesis*, all the passages and mouths of the Veins being made lax, and the blood sharp and hot. Cold hurts a Flux by *Diæresis*, 6. *Epid.* sect. 3. l. 14. For Cold breaks the Veins and provokes a Cough, the Cough also breaks them by Concussion. The second Impediment is Bile, which by its corrosion hinders the Cure of the Flux of blood by *Diabrosis*; for what Cure can there be where the Cause still is, that augments the Disease? The third is a Pleurisie, which, if it happen with Spitting of blood, gives and receives an Impediment, so that the one cannot be cured without the other. I do not here speak of Spitting of blood, which appears in a sanguineous Pleurisie, as yellow Spittle does in a bilious one; but of a Patient first taken with a Spitting of blood, and afterwards with a Pleurisie. These two Diseases mutually increase and hinder one the other in their Cure: They increase one the other; for a Pleurisie causes a Cough, which hurts them that spit blood: Again, Spitting of blood makes the parts in the Breast weak and easily susceptible, whereby the Pleurisie is furnished with greater store of matter: They hinder one another in Cure; for a Pleurisie cannot otherwise be cured than by Expectorators, as *Oxymel*, otherwise there is danger of Suffocation by keeping the Spittle; which cure is contrary to that which is proper for Spitting of blood, for which quietness is altogether proper; nor may the Cough be stopt, though it may break the Vessels. Here the Physician is at a stand, and *Galen*, 1. *Aphorism.* 16. says, he must take care of that which is most urgent. But I would offer

him a Patient in whom both Maladies were extreme urgent, whose Spitting of blood endangered his bleeding to death. And if the Pleurisie were not purged, there would be danger of strangling: Here a Physician would not know what to doe. While I was considering with my self this Difficulty, it came into my mind, that both Cures might agree sometimes, namely, if the matter of the Pleurisie be still crude and thin, if the Blood also sweat through because of tenuity, or make its way by its Acrimony; for then, both the Pleurisie, and the Spitting of blood, require incrassating things. The Pleurisie indeed, that it may easily be raised by Spittle, because it is brought up by impulse, to wit, by Cough, which is done more conveniently, where some resistance is: for a thin humour, when it is raised, is divided by the breath, and falls back in coughing: And Spitting of blood, if it come from tenuity and acrimony, could be moderated no way better, than by thickning it. But if the matter of the Pleurisie stick; not through thinness, but viscidit, then, because we must needs hurt the Spitting of blood in curing the Pleurisie (for we want Incisers) it must be done moderately, and not without giving the Prognostick first: For here the case is almost deplorable; yet not so as that the Patient should be given over, and left to the Prognostick.

Strp. Rod.
Cair. de
Complexu
morb. 6. c. 22.

VIII. The Difficulty is, at what time we should use things to dissolve clotted blood, for they open the Vessels, not shut them. Therefore we must consider, whether the violent Bleeding or the Concretion of the blood be more violent. If there be a breach of the Vessels of the Lungs, or fear of Inflammation; or if the blood come violently, it must presently be stopt; but when it is partly stopt, that is, when the Blood does not come so fast, or its colour is not so florid, things to dissolve the grumous blood are proper, after which we must proceed to glutinating things, or to such as consist of both, that is, *Oxymel* and Syrup of Purslain with Bole-armenick. But if Spitting of blood follow the breaking of the Vessels of the breast, because from thence there is no danger of a Consumption, the Blood must be dissolved and discharged before agglutination. There must be the same method, and we must endeavour the dissolution of the concrete blood, if it come from an *Anastomosis* of the Vessels of the Lungs, for there is no fear of an Inflammation. *Aretæus* advises that those things which are given, must be tenacious, to the end Concretion may succeed. Among such things Hare's Rennet is commended, which must be given sparingly; for a great deal of it is mortal, as the same *Aretæus* says.

IX. Grumous blood must be dissolved in the beginning, lest glutination be hindered, which may be done by taking three or four ounces of warm *Oxycrate* twice or thrice a day. But it must be so made, as that it may be pleasant to drink, lest too much Vinegar cause a Cough. If this will doe nothing, we must proceed to stronger things, as Rennet of Hare, Kid, Crabs-eyes, Mummy, *Sperma ceti*, *Antimonium diaphoreticum*. These things must be given at the beginning, if it come from an *Anastomosis*: But if from Rupture, the Flux must first be stopt, for it is more urgent than Concretion, and then the Blood must be dissolved.

X. *Galen* and *Ætius* allow *Posca*, onely *Averroes* condemns it; because, seeing it is made of Vinegar diluted with Water, upon account of the Vinegar it is hurtfull both for the Cause and the Disease, it raising a Cough and increasing the Fluxion by extenuation of the blood. Indeed, before the blood congeals into clods, it must not be used, lest we run hazards. But when it is clotted, and mortal Symptoms are imminent from it, upon account of the urgency it may be given, if there be no Cough, in respect whereof it is better to use Rennets,

M m

Treacle,

Treacle, *Diacurcuma* with Scabious water, and a Decoction of Maiden-hair, &c.

XI. If Blood be not stoppt with Astringents and Glutinants, we must flye to Narcoticks, which in-crastrate thin humours, and cause a sleep, which stops all fluxions. For Experience has taught us, that Pills of *Opium*, made for the purpose, never hurt any one, if so be the quantity were accommodated to every ones Nature, and not given but to strong Constitutions.

Enchir. Med.
Præf.

Hæurnius,
c. 6. l. de
Morb. Ped.

Idem, Meth.
l. 2. c. 8.

XII. If Blood retained in the Lungs by the use of Astringents begin to putrefie, give opening and dissolving things, that the black and filthy blood may come out, and afterwards the part may be cleansed, and cured by glutinant Medicines. ¶ When a Patient spits blood with his Cough, two Indications are urgent, for through necessity of respiration the Wings of the Lungs ought to expand themselves, wherefore there is need of expectoration: But effusion of blood forces us to endeavour astringent of the breast: *Syrupus myrtinus* has a certain admirable property of answering both these ends: Syrup of Purslane may be added, to thicken the blood.

Galenus.

W. Wedeli-
us, Misc. cur.
an. 1671.
obs. 43.

Fallopianus.

XIII. All Astringents contract and close the passages; and, besides, they knit and bind the substance of the parts, that stick one to another: and they doe this more or less according to the quantity of Astringent. But by astringing and condensing the outside of the body, which they astringe, their virtue is shut out, and hindered from going deep in. For which reason some Physicians have curiously contrived to put other subtle and sharp Medicines into such as these, whereby the virtue of Astringents may be carried deep into the body: But when the Bleeding happens in places about the Stomach or Belly, or Guts, there is no need of such a mixture of Medicines.

XIV. Concerning a methodical Cure, *Galen's* advice, 4. m. m. and 7. de comp. med. K. T. to wit, that both hot Medicines and of thin parts must be mixt with Medicines for Spitting of blood, that the astringent Medicines may better be distributed: therefore he advises to mix Honey. He has a mind to intimate, that Medicines earthy and of a thick substance, which onely stop, breed anxiety at the Heart, and difficulty of breathing, must not be given; but such as leave the motion free to the Air, and check the effervescent blood.

XV. Concerning Spitting of blood, I will tell you what I observed while I was in *Tuscany* at the Baths called *Villanæse*. I say therefore, I saw several cured of Spitting of blood and preserved from a Consumption by drinking of those Waters: but I observed one thing worth the notice, which is, that they who drank the Water for Spitting of blood, and presently voided the Water by stool, their drinking it did them no good: But they that kept it three hours, and then voided it, not by stool, but by urine, it did them much good. Whence I gather, that unless the Water pass by the Veins, it does no good for Spitting of blood, nor preserves from a Consumption: And that it may pass by the Veins, it is required, that it pass not presently.

XVI. That the aperture of the Vessel may be closed, Astringent and agglutinant Medicines are very proper: The chief of these is usually given in form of a *Linthus*, so that in swallowing them, some particles of them may fall upon the *aspera Arteria*, and more immediately communicate their virtue to the part affected. But this way of energy seems not to be of much moment, because the efficacy of these Medicines does especially and in a manner onely reach the seat of the Disease by the communication of the blood. Wherefore not onely *Eclegmata*, but also Decoctions, Powders and Pills, of Traumaticks and Balsamicks, are beneficially prescribed.

Willis.

XVII. In Spitting of blood, and in those Diseases where we want astringent and strengthening, spirituous, attenuant, aperient and sharp things are suspected: But in-crastrating and earthy things, which do not consist in the spirituous part, but in the very matter and corporeal substance, seem necessary. Wherefore if Corals doe any good in such cases, they doe it by their earthy corporeity, whereby they moderately cool and astringe, and perhaps moreover by some occult quality, which yet without doubt adheres to the whole substance. Entire and substantial Medicines, if you separate them from their proper body, do often put on an aliene and far different body, and so what before did good, do now cease to doe good, or even begin to doe harm.

Fr. Ign.
Theismuir.
conf. 4. lib. 2.

XVIII. Hence we may give a judgment of Tincture of Corals, in which Artists in Chymistry think that virtue is eminently vigorous, which is attributed to the whole Coral, that is, while the pure being separated from the impure and its dregs, does far more easily exert its virtues. Now *Dioscorides*, l. 5. c. 97. assigns to it a virtue moderately astringent, cooling, and of great efficacy against Bleedings. But concerning its Tincture, hear *Ph. Grulinius* his opinion in *suo Florileg. Hipp. &c.* par. 19. c. 3. In the preparation of Coral, Pearl, and pretious Stones, let every one have a care he be not deceived, and reckon he has the true Tincture, when he has onely a false and aliene one, or that he has obtained the *menstruum*. For there are some Tinctures, as of *lapis Lazuli*, which in redness may vie with Tincture of Corals: And there are some *menstrua* that grow red of themselves: Thus some do not blush to give Spirit of Vitriol tinged with red Roses for the coralline Tincture. Although therefore the Tincture of Corals, so called, often have a colour red enough, and the Coral be left in the bottom white; yet it acquires this colour either from the Salt of the Vinegar, as *Sennertus* will have it; or from the sulphureous part of this Salt, which easily joins it self with the Spirit of Wine, by reason of its cognation, as appears in the Tincture of Salt of Tartar, or by long Digestion, by benefit whereof many *menstrua* grow red; and the Corals, which after extraction appear white, do in a little while after receive their red colour, nor had they lost their inner colour; yea, the same Tincture may be made of white Coral and Crabs-eyes with the like *menstrua*. It must be observed besides, that in the common solutions of Corals Spirit of Honey is taken for the *menstruum*, which by its acrimony dissolves Gold a little: Therefore I cannot see, how this coralline Liqueur, whatever it be, or any other like it, consisting of Spirit of Wine, Salt of Tartar, Vinegar and the like, can doe good: For for the most part they answer not the intentions, they do not contemper, nor astringe, nor consolidate, nor stop blood; but they make thin the humours, sharpen, open, and now and then taken largely and inconsiderately they inflame, cause thirst, and by their acrimony do not a little offend the parts which they immediately touch. You may add to all, the mischievous avarice of the Apothecaries, who, to increase their Tincture of Corals, mix the Corals with Sugar in a Frying-pan, and rost them to redness, then by digestion they dissolve them in some *menstruum*, and draw not so much a Tincture of Corals, as of roasted Sugar.

Idem, ibid.

XIX. Blood is stoppt by *Scaliger* and *Hæurnius* their Powder, the Ingredients whereof are Seed of white Popy, white Henbane and Bloud-stone. But the use of it must not be long continued, because of the Henbane-seed, which is very hurtful.

Frid. Hofmannus, m. l. l. c. 21.

XX. Some, as on experience, do recommend Nettle-juice in the morning for several days: But there are not a few things which render the truth of this suspected by me, and though the kind, of which

which there are several, be not determined, I believe it is the common stinging Nettle that is meant: But, 1. This is of very subtle parts and of a digesting nature, wherefore, according to *Dioscorides*, it opens, moves Urine, and egregiously forces Women's obstructed *menfes*. 2. Taken inwardly, it is of a sharp, absterfive, titillating quality. 3. The Seed is in frequent use for raising of thick and viscid humours, yea, even of *Pus* in an *Empyema* of the Breast. 4. It and its Seed, according to *Galen*, has some flatulency in it; and is said to stimulate *Venas*. If the Nettle therefore be of such subtle parts, as to open, force the *menfes* and urine, by titillation to give a stool, by its sharp flatulency to provoke lust, and if the Seed for its excessive heat be reckoned among eroding things, how can the drinking of 4 ounces of the Juice for several days one after another doe good in this case? But I think it is good for hæmoptoick and empyematick persons, namely, that the extravasated blood, coagulated in the Breast of them that have been long ill, or turned into *pus*, may be timely deterged and expectorated. Wherefore I cannot say, it is probable, that the Juice of Stinging-nettle does good in the beginning for Spitting of blood, as a peculiar Remedy that stops blood.

Thiermair,
ubi supra.

XXI. In other cases Linseed-oil is commended to be of great virtue, as in a Peripneumony, Phthisick, Colick, but especially in a Pleurisie, according to *Gesner*, 1. Ep. 49. I, faith he, have several times experienced, that there is nothing better in these pleuritick Pains than to drink Linseed-oil, and this presently eased respiration, and promoted spitting. Therefore it is carefully faved among us clarified in the Sun, which clarifying is better than that which is made by *lixivium* or a roasted Onyon. By anointing their Belly therewith, or by covering it with a linen cloth wet in it, they make the Belly loose, but I no where observe that it does good for Spitting of blood. Yet in the beginning of the year 1675. I often visited a Woman fifty years old, who had her *menstrua* a long time, not largely, but continually, and then she was troubled with a grievous catarrh, of which, by my advice, she was cured with a Decoction of Ground-ivy, Chervil, Lungwort, Woodbine, Liquorice, &c. Once, early in the morning, I was called to her, I found, to my amazement, she had voided above a Pint of florid blood, such as usually comes from the Lungs; she had spate it up between 4 and 5 in the morning; I immediately ordered a Vein to be opened in the Arm, and I gave her some drops of the Tincture of Blood-stone, in *Syrupus de Symphyto Fernelii*: But her Spitting of blood returned again towards night, the Patient refusing to take any thing, Linseed-oil came into my mind, which pleased her, she took one spoonfull, and by continuing the use of it for several days, she recovered. I believe the Spitting of blood arose from some Vein broken in her Lungs, which was healed by the balsamick and emplastick virtue of the Linseed-oil. I tried it in others afterwards, not without success, giving first the Tincture of Blood-stone.

Car. Rayer,
m. c. an. 76.
obs. 209.

XXII. Starch is good, because emplastick, because it stops the gaping vessels, and thickens the humours, for it is the Juice of Wheat, first steeped in Water, and then strained out. But we must abstain from that which is made of Bran steeped in Water and strained out, for such is rather opening and absterfive. The worst is that, which, to make it white, has Lime mixt with it, because it is inflaming and opens rather than shuts the mouths of the vessels.

Riverius.

XXIII. I have cured several of Spitting of blood, before they fell into a Consumption. The Cure was such as is described by *Galen*, 1. 5. *Meth.* this one thing added, I applied linen clothes wet in Juice of Plantain to the Kidneys, by which means I cured a Man almost seventy years old, who had voided above ten pounds of blood.

Cardanus.

XXIV. If the Blood be very watry and serous, as it usually is in all Hæmorrhagies; when the Spitting of blood is stoppt, 1 scruple of Powder of Rheubarb is convenient every day in the morning, an hour before break-fast: For thus the blood, when the serous humours of it are purged by degrees, may recover its pristine thickness: Or one drachm of Rheubarb may be taken once a week. Otherwise all Purgatives in this case must be avoided. ¶ When all things are done, as to revulsion and interception, we must proceed to evacuation of excrements. And though *Galen* gave strong Purges, yet it becomes us to be content with immature Rheubarb, and shells of citrin Mirobalans and *Cassia*; Yea, onely with *Cassia* and Pulp of Tamarinds, till the Ulcer be perfectly healed: For otherwise there would be danger, lest by the agitation of the humours the blood might burst out again, and the Ulcer might contract an Inflammation from hotter Medicines.

Casalius
in Catoptra
Art. Med.
1. 6. 16.

Fortis, conf.
15. cent. 22.

XXV. Stopping of the blood must not be attempted with very astringent things, when it is voided in abundance by the Throat. For by the use of them and coagulating things, it congeals out of the Veins, sticks by the way, and so uses to choak a Man out of hand.

idem, conf.
25. cent. 24

XXVI. Blood, whencesoever it comes into the *aspera Arteria*, that it may not coagulate there, and then corrupt, must immediately be kept dissolved with convenient Medicines, or must be dissolved again, and voided. To which purpose Crabs-eyes with *Antimonium diaphoreticum* must be preferred above many other Medicines, dissolved, in part at least, in a little distilled Vinegar, and taken with the addition of gratefull things; for in this case they perfectly doe the work; for example, Take of Water of Hyssop, Fenil, each 1 ounce; *Aqua vite Matthioli* 2 drachms, distilled Vinegar half an ounce, Crabs-eyes half a drachm, *Antimonium diaphoreticum* 1 scruple, Syrup of Maiden-hair 1 ounce. Mix them. But in such mixtures that have Crabs-eyes dissolved in Vinegar in them, we must have a care we add not Syrups made of mucilages, such as *de Althæa Fernelii*, *Jujubinus*, of Violets, and the like; because either immediately, or in a little time they grow thick as mucilage, and unfit for use, which they will not so easily doe, if Syrups made of aromattick things be made use of, especially new, for several in tract of time grow viscid.

Sylvius de le
Boë.

XXVII. When from the proper affection of the Lungs either pure blood or corrupted and turned into *pus*, is voided; there is great danger, wherefore we must make the more haste to cure it, lest the opportunity be lost by procrastination: For the singular substance of the Lungs is easily infected and corrupted, but is difficultly restored. We must not desist therefore from the use of Medicines, that cure the flux of blood out of the broken vessels of the Lungs, and the corruption of it, till the Disease be perfectly cured. Nay, I should advise, that for some time after the Disease were cured, as to appearance, the Patient should continue in the moderate use of gentle Medicines, to the end that the part once affected, and therefore again liable to be affected, may be strengthened against the coming of the Disease anew.

Idem

XXVIII. But like as always in other cases, so here also we must take diligent notice of Medicines that are most agreeable to every individual, that such may be preferred before all others, and the use of them may be continued, as long as they doe good. But as soon as they are observed not to doe much good, others must be substituted in their room, and the Patients health must be promoted by all means.

Idem.

XXIX. Spitting of blood with a Cough imposes on good Physicians. They are deceived by all the Signs, and think it comes from the Lungs, when it falls from the Head, or comes from the *vena aragosa*, by

M m 2

by reason of some evacuation being intercepted, and is expectorated. ¶ One had been troubled with much Spitting of blood for a long time, and could be cured by no Remedies. And he complained onely of something like a Lump of flesh, that stuck in his Throat. At length, when the Patient had mounted a mettlesome Horse, he was taken with so violent a Cough, that he voided a Leech by the violence of it, upon which he was quickly well. ¶ Many Physicians ask their Patients, Whether they find any salt or sharp taste in their Catarrh? If they say, No, they immediately pronounce, that the Blood cannot be spit out of the Breast and Lungs. But *Galen*, 4. loc. affect. 8. refutes them, saying, that many become consumptive, when the Spittle does not taste salt at all: Therefore it may so be, that a putrid matter, but not sharp, may purrifie the vessels of the Lungs and consume them by erosion, so that blood may be voided. ¶ *Præ-votius* observed Spitting of blood without Coughing, as if with a certain expiration: for blood of a temperate substance, is easily voided, and therefore without coughing, just as a distillation is carried through the cavity of the *aspera arteria* without coughing, the sides of the Artery not being irrigated thereby.

XXX. When *Spigelius* had healed up an Ulcer in a Girl nine years old, at the request of her Parents, a little while after she spate blood. He was sent for to advise: He made an Issue in the place where the Ulcer had been, and gave her a Decoction; and not onely preserved the Girl from a Consumption, but reduced her to a much better state: and she lived a long time. Therefore we must diligently consider the content of the Veins and Arteries.

XXXI. We must have a care, while we would doe good, that we doe not a great deal of harm: for *Galen*, lib. de const. art. c. 17. says, "I know they doe a great deal of hurt, who in such as cough blood out of their Lungs, apply astringent Medicines all over the Breast: for, besides that their virtue does not reach to the Lungs, they also drive the blood in the Breast to the Lungs". He thinks the same, lib. 5. meth. cap. 6. of cold things without astringent. Yet these passages must not be so understood, as if they could never be used; for after derivation or revulsion of the fluxion is made, they may be applied by *Galen's* own concession, in the same place, "Therefore, says he, I would not advise without difference, nor at all times, to apply cooling things about the part whence the blood flowes, till after you have averted it to another place". Also the application of astringents is hurtfull, if straitness or compression, or any difficulty of breathing accompany it.

XXXII. The course of Diet, as it must not be very spare, so by no means attenuating, but very incrassating: for Men are very much mistaken with *Erassistratus*, who think a spare Diet is proper in these cases, to the end the abundance of blood may be diminished, for so it is made more thin, bilious, turbulent and ever more ready for efflux.

XXXIII. One would think a cold Air should be avoided, both because by its violence some vessel is often broken in the Lungs, and because it may occasion a Cough, which may open the Vein farther. But in truth there is greater danger in a hot Air, because by dilatation it may augment the flux, and by the diuturnity of the flux the dilatation is greater: but the Cough, occasioned by the cold Air, may easily be stopt by holding ones breath: Nor does our domestick Air so much straiten by its Cold, as to endanger the breaking of any Vessels: because a cold Air is onely apt to doe that, when there is great plenitude in the body, which when taken away, there is no danger at all.

Medicines especially made use of by eminent Physicians.

1. For Stopping of blood, it is very good to dip the *Scrotum* in cold water.

Claudius.

2. The following Eleſtuary is admirable for the Stopping of blood; Take of Seed of Henbane, white Popy, each 10 drachms; *Terra sigillata*, red Coral, each 5 drachms; old Sugar of Roses what is sufficient. Mix them. Make an Eleſtuary.

Crato.

3. *Sealiger's* Hæmoptoick Powder; Take of burnt Ivory, red Roses, Bole-armenick, Bloud-stone, *Terra sigillata*, each 5 drachms, red Coral, Pearl not perforated, *Carabe*, each 2 drachms; Gum-arabick, Tragacanth, each 2 drachms; Seed of white Popy, red Roses, Mallowses, Purslain, Plantain, burnt Hartshorn, each 2 drachms; *Acacia*, Juice of Liquorice, each 2 drachms; dried Starch 3 drachms. Mix them. Make a Powder.

Deodatus.

4. A drachm of *Philonium Persicum* in Plantain and Purslain water given before meal, has done many good, in Spitting of blood, when no other Medicines would doe any; as also a Decoction of *Ju-jubes* cold, wherein hot Steel has been quenched. ¶ I gave one a drachm of Bloud-stone finely powdered, and it did him a great deal of good. I have also taken the same Stone finely powdered, washed much in Plantain and Shepherds-purse water, and then strained it, that the water might acquire redness, and mixt it with Syrup of Purslain and Myrtle, and so gave it for Spitting of blood. ¶ Syrup and Lohoch of Purslain are both very good for Spitting of blood.

Forestus.

5. This is *Hæstor de Manfredis* his Secret; Take of Germander, what is sufficient, bruise it, infuse it in Scabious water and Wine; then strain it, and drink it warm.

Goclenius.

6. I use every morning to give about half a drachm of white Popy-seed, with half an ounce of old Sugar of Roses, which Remedy I know has done a great deal of good to several.

Mercurialis.

7. This is an infallible Experiment, given at any hour, and at any time; Take the shell of a raw Egg, cast away the inner Skin, powder it: Take of this Powder 2 drachms, Plantain water 3 ounces. Mix them. And give the Mixture to the Patient, and you shall suddenly see it will heal. If you would have it work more effectually, you may give 2 drachms every day, five days together, with Syrup of Purslain, dried Roses and Myrtles, each half an ounce. Mix them.

Ben. Victor.
Faventinus.

8. This is an admirable Syrup; Take of Juice of Plantain and Vervain clarified, each two pounds: wherein let boil Gum-arabick, Tragacanth, Juice of Liquorice, each 4 ounces; Mumy, Dragon's blood, Bole-armenick, each 1 drachm and an half; Sugar of Roses what is sufficient; it is excellent for Spitting of blood, whence soever it comes.

Arn. Vill.
novanus.

Hæmorrhagia, or, Bleeding.

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Medicines.

I. **T**HERE is a twofold Consultation, first, Whether Blood ought to be stopt? which is the most difficult: The second, How? For all Bleeding ought not to be stopt, but some must be stopt, and some must be helped; some must only be let alone, because some is very wholesome, some pernicious. Certainly, if one bleed after a blow or a fall, there is no danger in stopping the blood: Wherefore we may use Astringents and moderate Coolers: Unless it happen that a Man is full, for then blood must be let, or we must suffer it to run in some measure. When the blood runs onely by reason of abundance, you have no reason to stop it: for, by letting it run, the abundance is abated, when that is abated, the Bleeding stops of it self: unless in the mean time some great Vein be broken, for then there will be need of an Emplastick and Astringent, such as Galen's Medicine, which is one of the best. When the Bleeding is because of some malignant quality, either alone, or with abundance, then the Physician is at a stand, because the case is either way dangerous; for if it be not stopt, by reason of the impotency of the retentive faculty, which the Irritation causes, it runs to faintness, especially seeing he that is very cacochymick, cannot bear any large evacuation, and quickly faints: If it be stopt, because the malignant blood cannot rest quiet in any place, it falls violently upon some inner part, which happens to be weakest, as it fared with an old Man, who, after he had bled abundance of thin blood (for he looked very greenish

in the face) and the blood was stopt by proper means, died of a Pleurisie. Therefore what must be done in so doubtfull a case? Surely, what Hippocrates, 6. Epidem. sect. 3. advises, When you have let it alone a little, you must incrassate drily; and about the part you must use a white and dry thing, it may be, Galls and Alum in Powder. He says, you must let it alone a little, that is, we must not presently stop it, but let it run a little. Certainly for what cause soever, even an external one, the Bleeding begins, it must be permitted a little, before you stop it: For Blood-letting is good not onely for a Plethory, but a little for a Cacochymie, a Blow and a Fall, and we are willing to have the blood run a little in any green Wound: But as in Cacochymies blood must be let sparingly, because they have not wherewithall to support it, so also spontaneous Bleeding must be let alone a little. If therefore you see one bleed, where signs of a Plethora are, let him alone till the Bleeding stop of it self, though the Man should faint. But if a Man bleed who looks pale and green, or pale, or pale and black, have a care you let him not bleed much, or till he faint; for it is very dangerous for such Men to faint. But if you suffer it not to run much, how will you hinder it from falling upon some part? Surely by Incrassating drily. Which I explain thus; It happens that People are in danger two ways, by abundant Bleeding, and by a slow and small Bleeding: For I knew a Woman who continually bled drops of blood for above six months, and while she tarried so long a time for help, but found no benefit by all the Physicians did, she died. We must therefore cure them both in the same method, those that bleed much, and that bleed little, except what the different indications do require. And one difference of indications here is that which is common to all other Diseases, that quick Diseases must be quickly cured, and others more slowly: Beside this, there is another difference in the manner of Cure: For where the blood comes by little and little, I can by no means think it must be let alone, to run by little and little, but rather that that blood should be taken from the Arm or Leg, as other things do indicate, by opening a Vein, which would have come away, had you let it alone; because if you let it bleed slowly, and let it alone a long time, the Man will be more hurt by his custome of Bleeding, than he will receive good by Evacuation of what is redundant. And in this first Rule Hippocrates seems to treat of Bleeding fast. But what follows, But in others you must not incrassate so much, but you must use a dry, white Medicine, such as Galls and Alum, may be understood of both Bleedings. For in both cases, whether, I say, it bleed slow or fast, when it is caused by a corrupt and thin blood, it is good to use things that thicken, and make slow the motion of the blood. And because besides these things it is necessary to make application of things that stop, we must reckon, that Hippocrates in these last words understood local Medicines; in the former, things to be taken by the mouth. Therefore, he says, you must incrassate drily, that is, use Medicines and Meats that dry and thicken: And there are two sorts of things that doe this, one by thickness of parts and astringion, as Pap made of Starch and Lentils, Syrup of Myrtles, &c. others make slow the motion of the blood without thickness and astringion, by giving it a certain thickness by accident, by cooling, or by cooling and drying; the first we use for slow Bleeding, the latter for sudden: For in Bleeding fast, it is too long to tarry for relief from eating Starch or Pears: But then drinking of cold Water, or a Decoction of Cinquefoil, which I use very cold, may do good. Yet the taking of thick and astringent things does by little and little thicken the blood, and so may doe good in slow Bleeding. But the use of such things seems hurtfull, because it either causes obstructions, or increases

increases preceding ones, whence much damage may follow, and it hinders Purging, if it so happen that there be occasion for it afterwards: Therefore, as much as may be, I avoid the use of such things: Nor do I allow them to wounded persons, nor to such as are troubled with Bleeding, except such as bleed for no other cause but the thinness of blood, especially them, whose blood is corrupt. In these, unless there be manifest obstruction of the Bowels, we must use thickening Diet and Medicines. And the greatest share of such a Diet is to drink very little, because driness thickens the blood. If there be a thinness of blood without any manifest obstruction, we may use thickening Meats, and astringent and thickening both Meats and Medicines: But if there be any obstruction, it is better to use a dry Diet without thickening, and cooling, and dry Medicines: And if any Bowel also labour of a cold intemperature, we must abstain from all these things, using onely a dry Diet, as roasted flesh good and tender, and little drink; and if the case require it, we must give Potions contrary to the aforelaid, that is, hot and thin ones, that they may open. But we must place all our hopes in other Remedies, that is, in Revulsions, Frictions, Ligatures, Cupping-glasses, and then in local Medicines. I use to make a Powder of Gall, Alum, Flowers of Pomegranate wild and planted, Comfrey and Mastick, which I order to be blown into the Nostrils violently: for it presently comes to pass, by its mixture, that the Blood congeals, and violently stops the Veins, for the Blood it self is fibrous and stopping.

Vallesius,
comm. in e-
um locum.

II. S. a Clergy-man, sanguine and lusty, having been subject to bleed at his Nose from his youth, fearing some mischief thereby when he was grown up, for prevention, he stop it by hanging a certain Amulet about his Neck; whereupon he was taken with an Apoplexy, and twelve hours after he was dead, abundance of Blood ran out at his Nose and Mouth.

Hildanus,
cent. 3.
obs. 11.

III. It being presupposed, that immoderate Bleeding comes either through some fault in the Moveable or Blood, or in the containing and conveying Vessels, we say, that all Ischaïmous Medicines respect the Blood it self, inwardly indeed, inasmuch as they check Rarefaction and Ebullition, either Precipitants, earthy things of all sorts, of Coral, Blood-stone, Spodium, &c. Or tempering things, that are watery and cooling, as Water of Shepherd's purse, Plantain, Purslain, Water-lily, Frogspawn, Phlegm of Alum, &c. Or coagulating and congealing Acids, as Tincture of Roses, Violets, and acid Spirits. Thus I have cured some scorbutick persons who were frequently taken with Bleeding at the Nose, onely with Spirit of Vitriol joined with the Tincture of Violets: For Acids obtund and invert the volatile and too moveable particles, and do, as it were, fix, concentrate and hinder them from overflowing. And things that incrassate and astringe the ichorecent Blood inasmuch as it is too ferous, sharp and fluid; wherefore we may partly hope for Remedy from strengthening and tonic things, and partly from strong astringents and concentrating things: So in a manner all red Roots stop Blood, Tormentil, Bistort, *Alkanna*; *Heurnius* his Powder is excellent for Spitting of blood; Take of Seed of white Henbane, white Popy, each 1 drachm; Blood-stone, red Coral, each half a drachm; Camphire half a Scruple; Give half a drachm morning and evening, sometimes he adds *Terra Lemnia*, and with Conserve of Roses he makes an Electuary. And fixing things, the common Remedies of all Fluxions, *Laudanum opi-*

Wedelius,
de f. m. f. d. atum, &c.
p. 531.

IV. Both Revellents, and things that cause a motion the contrary way, are good outwardly. So Venæsection is conveniently made in a contrary part; So a dry Cupping-glass is set to the Nape of the

Neck, an *Arcanum* among the Moderns, Ligatures are made in the extreme parts, &c. and cooling Repellents, either actually such, or potentially, as Oxycrate. *S. Pauli Quadr. Botan. p. 508.* says, that Starch and Bole-armenick mixt with the white of an Egg, spread upon some combed flax of such a length, that it may reach beyond the Coronal Suture to the root of the Nose, if it be applied to the Vertex along the Sagittal Suture, does upon his frequent experience stop Bleeding at the Nose. A sudden Fright, as it suddenly recalls the blood from the circumference to the centre, and a *Leipothymie* supervening, stops blood. Sudden application of very cold Water, Vinegar or Ice to the Nape of the Neck, does the same. And Astringents and Compriments, as Blood-stone, and other things, as well by actual cold, as potential constriction from their Martial and earthy particles, held in the Hand or under the Arm-pits; I have known the Root of Cockle, held a little while under the Tongue, stop onely a slight Bleeding, but not a violent one. A piece of Money thrown into cold Water first, and then tied hard to the Forehead, to compress the Vessels and cool, is good.

Idem.

V. Ischaïmous Medicines, that respect the passages and pores of the Vessels, which being any way opened, it is absolutely necessary, that the blood left to it self must run out; Inwardly indeed they are the same, which we have spoken of already, Consolidants, Astringents and Agglutinants; Outwardly they are Compriments; for though the compression of the opening it self may seem onely to give momentary relief, which ceasing, the Bleeding returns, yet by this means the Lips being constantly prest, Nature may attend healing, wherefore it is a Remedy proper enough. Thus the Wound of a bled Vein is stop a whole day onely by the compression of a *Splenolus*, so the Bleeding of other Wounds is stop onely with Binding, if a Chirurgical hand can come at them. An Example hereof *Virulam* has, *Histor. Nat. cent. 1. n. 66.* in the Prince of Orange, the orifice of whose Wound was stop with Mens Thumbs for two days, other things being in vain. So some Hæmorrhagies of the Arteries cannot be fully cured but onely by Compression. And things that stop blood, upon which account the Fuz-ball is famous, wherefore *Van Horn, Microtechn.* writes, that if it be tough and soft, and cut into slices, and the slices be squeezed in a Press, they are able sufficiently to stop any Hæmorrhage, especially if some stegnotick Powder be strewed on them. One in *Grulingius, cent. 1. cur. 42.* was cured by the Powder of Egghells, wherein Chickens had been hatched. And Astringents, that are watry, austere and sharp. So pieces of a fungus growing on Birch, stop an external Hæmorrhage to a Miracle, according to *Crollius*, and things that coagulate and reduce the Blood as it were to a Crust, for it is glutinous, and another glutinous thing meeting with it as it comes out glues up the Vessels. See an Example in *Platerus, Obs. l. 3. p. 725.* of a Malefactor who had his Hands cut off, and the stumps immediately clapt into a Cock newly opened alive, upon which the blood wholly stop. Warm blood of Animals is given to People in Dyenteries for a Clyster. Or things that violently cause a Crust, whether actual or potential: *Willis* saw a most violent Hæmorrhage stop with the Vapour of the blood falling upon a red hot Iron. So Cauterization by roasting the Blood, and crisping and closing the Vessels is the last Remedy. You may refer hither the Sympathetick Powder, the blood dropping upon which, causes this astriction, but it is onely in a slight case. Or they respect the free passages of the blood, Wherefore Aperients do improperly and mediately stop blood, because they restore the Circulation of the blood, when hindered; as we often find them very beneficial in a too violent flux of the *menfes* and in other Hæmorrhagies.

Idem.

VI. To

VI. To divert the tendency of the blood from the Nostrils, it is sometimes convenient to open a Vein in the Arm or Foot: For the more blood is carried by the Arteries to the place of Venæsection, the afflux to the Nose will be the less. Yet this administration does not always so much good, but that a quite contrary effect sometime falls out, the reason is, because the Vessels being suddenly, but not sufficiently emptied, do take back again the incongruous humours before thrown out, stagnating within the Pores, whereby the blood is immediately put into a greater eruptive turbulence.

Willis.

That Venæsection in the Foot is more effectual than in the Arm for stopping an Hæmorrhagie at the Nose, I have learned from a late Example, and that repeated. Last March, in the year 1681. A Man about thirty years old, choleric and lean, had had a Quartane-ague from the preceding autumnal to the vernal Equinox: A double Tertian followed this, with tension of the *hypochondria* and of the whole *abdomen*, and a pertinacious Bleeding, rebellious to all Remedies: Blood was let in the Arm, and other things done, and nevertheless he bled still; after application of glutinous things, it ran into the Mouth, which he spate up concrete in abundance. His strength seemed to fail, what with the foregoing Fever and the loss of Blood, his Face fell and grew pale. But because the heat about his Heart was troublesome, his Pulse full and strong, and the Blood came out with violence, I ordered the most tumid Vein in his Foot to be bled, out of which the blood came full stream; a little after he fell into a sweet Sleep (which he wanted before, because his Ague-fits came in the evening) and he continued in it till night: afterwards his Bleeding and Ague both left him, he being rid of both by means of Bleeding in the Foot. I had prescribed him some opening Pills for his remaining obstructions, which he did not take, because within a few days, by the use of a good Diet, there appeared no signs of any, so that in four days after his Bleeding he was perfectly well. Another Instance offered it self at that same time in a young Man (whose name was *Frederick*) Servant to the Family of the illustrious Counts of *Waldeck*: he was *hypochondriack*, and he had been fore handled by a Quartane-ague all the Winter. When the cold season abated, which lasted till the latter end of April, he bled at the right Nostril: I ordered his right *Salvatella* to be opened, out of which the blood came full stream, his Bleeding at the Nose not abating. The blood being received in linen clothes appeared florid, not like to washing of flesh and ichorous: I also ordered a Vein to be opened in his right Foot; and about seven ounces of blood were taken from thence in Pottingers, which gave evident signs of corruption: Store of blood also ran into the Vessel, wherein the water was, which the Chirurgion could scarce stop after he had untied the fillet. The event was the same as in the former case; for both his Bleeding and Ague were stopt.

Hence you may gather, what the nature of the humour is, that causes a Quartane-ague, which onely the power of the returning Sun is able to conquer. The febrile Fire does lye as it were raked up in the Ashes, which, by the accession of such a blast, breaks out into a flame, but an innocent, yea a salutary one, which feeds on, and consumes onely its own fuel, leaving the solid parts, and the other humours untouched. It was my hap to observe this in the forefaid *Frederick's* Lord, the young Count *Waldeck*, who had patiently and obstinately endured a Quartane-ague from the preceding August. He had a wonderfull Antipathy to all sort of Physick. At length, as the Spring came on, when signs of a Cachexy and *Leucophlegmatia* appeared in his countenance, when he made little Urine, which had a large tartareous settling in the bottom of the Chamber-pot: I told him he was going into a

Droplie. He, being affrighted, admits of Pills (from which he was less abhorrent than from other Medicines made of *massa Pilul. de Sagapeno Camilli*, *Mercurius dulcis*, and *Tartarea Bontii*) and a laxative Pilsan to drink after them; which brought abundance of filthy stuff away; and the Ague, which of a simple one was become a treble one, at length was a single one again, and within a few days quite ceased. Yet the third day after his Ague went quite off, he was taken with a Diary, which ended in a Crisis; by stool, urine and sweat together, which was followed by perfect health. That is, by this last and gentle Burning all the febrile matter blazed out. But this by the way.

VII. Letting of blood is the chief among revulsory Remedies, but it ought to be drawn with a large hand and a broad hole. All Men in a manner bleed at a small hole, and in a small quantity, reckoning that Revulsion is better made so: But, that a contrary motion may be communicated to the blood, it must be acted by a more violent motion, because the more violent draws the weaker: Therefore at the larger hole, and the faster the blood runs, so much the sooner is the profluent blood drawn from the Nostrils: So that oftentimes a violent Bleeding at the Nose, without a *Plethora*, has been instantly stopt by Venæsection, celebrated in this manner. ¶ Whether must blood be let all at once, or at several times? I think, if it be let all at once, it will doe the Patient more good: for, when the blood gushes out of the open Vein all at once, quicker Revulsion is made of the blood, that would run out at the Nose.

Riverus.

Rasiniacus
conf. 2. lib. 3.

VIII. *Galen*, *s. Meth.* and many, who follow him, apply Cupping-glasses to the region of the Liver, which, that it cannot be done without danger, the following History does prove. A certain Courtier, labouring under a violent Bleeding at the Nose, made use of a Chirurgion, who, among other Remedies, set large Cupping-glasses to the region of his Liver. The blood indeed stopt, but an Inflammation of the Liver followed. I think cold Medicines should rather be applied to the Liver and Spleen, according to *Hippocrates* his advice, *s. Aph. 23.* In these places, whence blood runs, or is about to run, we must use what is cold, &c. Especially to places where the motion begins, unless there be obstructions, which would thereby be made worse; for as these things condense, astringe, and render the blood less fluid, so Cupping-glasses indeed retract the blood and spirits with violence; but because in a great Hæmorrhagie it is effervescent, it may easily be drawn by the Cupping-glasses to the Liver, and settle there.

Fab. Hildan.
nos. cent. 2.
obs. 47.

IX. A Noble Matron, fifty nine years old, having omitted letting of blood, by reason of her decay in years, was suddenly troubled with an enormous Bleeding at the Nose, the blood ran, as though she had been let blood. I prescribed cooling and repellent Epithemes for her Forehead and Neck, but she bled the faster. A Chirurgion put Tents into her Nose full of Powders to stop blood, but they were ready to choak her; and when they were taken out, she bled enormously. Her Fainting dissuaded me from letting of her blood: Therefore I set a large Cupping-glass first to the region of the Liver, and then another to the Nape of the Neck, and her Bleeding stopt immediately. This Remedy did others good. A Cupping-glass is dangerous in the beginning of an Hæmorrhage.

G. C. Win-
det. Misc.
cur. an. 76.
obs. 90.

X. It is well known that Cupping-glasses set to the Shoulders and Neck are a most excellent Remedy, yet I have sometimes observed, they have been used to the Patients detriment. A plethorick Man, who was ill of Bleeding at his Nose, by the advice of his Physician, got Cupping-glasses to be set to himself by the fire-side, and in a few hours his Bleeding increased so, that he lost several pounds of blood. I being called, order him presently to go from the fire, and that his Back be anointed with

with

with a cooling Ointment, Ligatures to be made upon his Arms, at the Elbows, and upon his Legs, at the Hams; I apply a linen cloth wet in Water and Vinegar to his Forehead, and I put some of my Powder described *lib. de Gangrena, cap. 19.* with Tents dipt in Whites of Eggs into his Nose. Hence let young Men learn, that in all Hæmorrhagies, the Body must not be heated, nor the Back rubbed with hot Clothes, nor exposed to the Fire.

F. Hildanus,
cem. 6. obs.
13.

XI. Cupping-glasses applied to the Shoulders, both dry and moist, retract the running blood from the Nostrils, but are not a Remedy altogether safe, for they may draw the blood from the lower to the upper parts, and give occasion to new Bleeding. Some let them upon the Arms upon the *Musculus biceps*, whereby Revulsion is made of blood from the Nose.

Riverius.

XII. Only arterious blood nourishes the Brain, and runs out at the Nose. Therefore Coolers and Afringents must not only be applied to the Neck behind, but before also upon the carotid Arteries.

Rislaous.

XIII. Topical Medicines must be applied to those parts, where need is of them immediately, or where the blood may be most cooled: For there, by immediate contact, if it be possible, they stop the orifices of the Vessels; but here, by intimately altering, they check the violent motion of the blood, so that, to repeat them in short, they are applied to the *Bregma*, Forehead, under the Tongue, to the Nape of the Neck, the Nostrils, Throat, to the Armpits, the right and left *Hypochondrium*, the Stones and the Soles of the Feet.

Wedelius.

XIV. The Blood does not always come from the Veins of the Head, but oftentimes from the small Vessels, that come out of the third *Sinus* of the *Cassa mening.* when they open, a very great Hæmorrhagic sometimes arises: In such Bleeding, Medicines must be applied, not to the Forehead, but to the *Vertex* and coronal Suture. ¶ In such a Bleeding at the Nose Topicks must be applied to the hind part of the Head, for the Blood ascends by the hinder *Sinus's* before it comes to the third: Therefore *Hippocrates* ordered the hind part of *Meton's* Head to be fomented with warm water, to the end the Blood might run more freely.

Bouhins,
Th. Anat.
l. 3. c. 8.

Sennertus.

XV. The Head must not be washed with cold water, unless Revulsions have gone before, whereby the blood may be drawn to the lower parts of the Body, or to the hind part of the Head: otherwise, being driven inwards by Coolers, it will fill the Veins which are within. ¶ Therefore the Bleeding will increase on this account, and because the Heat, gathered within by *Antiperistasis*, furthers the motion and violence of the blood: Or, if the blood be stoppt, a Convulsion, Apoplexy, *Parotitis*, or, the Blood falling upon the *Aspera Arteria*, a Difficulty of Breathing will follow.

Gal. 5. Met.
Med. c. 5.

XVI. Moreover this is suspected, when the Vaggar at the beginning lay a linen Cloth wet in cold water round the Neck: for there is fear, when the way is intercepted between the Heart and Brain, either an Apoplexy or a Swooning may follow.

Sennertus.

XVII. Cold things applied to the Forehead and Temples, and the Nape of the Neck, where the vertebral Arteries ascend, do a little check and repell the afflux of blood; Yet some doe ill in advising cooling Topicks to be applied to the jugular Veins: for so the Blood, being retarded in its return, will run more abundantly out at the Nose. Moreover, whereas it is usual to apply linen Cloths or a Sponge wet in Vinegar to the *Pubes* and *Genitals*, it does good upon no other account, than as tying of the Limbs, inasmuch, that is, as the reflux of the venous blood is thereby hindered.

Willis.

XVIII. Many use Ligatures, but I do not much approve of them, although *Galen*, 5. Meth. 6. propose them: for, as soon as the Ligature is loosed, it

fills the Head, for the Blood being retained under the Ligature, is made more violent, and runs to the weakest part. ¶ I do not willingly use Ligatures, both because they deprive the subject parts of spirit and blood, and because by the compression of the muscles, they seem to exagitate and impell the fluent blood. ¶ *Aesclepiades* of old condemned them, as *Scribonius Largus* writes.

Enchirid.
Med. lib. 5.

XIX. Cruel Ligatures, joined with an impetuous motion of the blood, are useless: for though gentle binding of the extreme parts and astriction of the Forehead be not insignificant to stop the Blood a little and to bind the Vessels, and upon that score also cold things, as Stones and the like, beside the *Effluvia*, which they send out, are commended, if they be held in the Hand, or under the Armpits; yet if the due bounds, which become a Physician, be exceeded, the Bleeding is so far from being stoppt, that it rather bleeds the faster.

Wedelius.

XX. Swathing egregiously stops Bleeding, which follows a Wound in the Veins; but if it be tied too strait, it easily causes a *Sphacelus*.

XXI. At length, if Bleeding continue obstinately, we must proceed to Escaroticks, which, by burning the extremities of the Veins, do cause a crust, and stop blood: Nevertheless much caution must be used about them, because, when the Eschar falls, the Veins open again, and so the Bleeding is usually removed. And, among such things, burnt *Vitriol* has the principal place, which, besides that it makes an Eschar, is most effectual to stop any Bleeding. ¶ Causticks and Corrosives, as *Sublimæ*, *Arsenick*, *Aqua fortis* and *Colcothar*, must not be commonly used, both because they irritate the membranous edges of the Wound, and also cause very violent Symptoms, and so Death it self; indeed in the beginning they close and bind the Veins, by reason of their pontick, styptick parts, but then they shew their corrosion, wherein they are prevalent, and communicate it to the part. Yet we must take notice, that some of the gentler sort, as *Colcothar*, may be used, and *Aqua fortis* sometimes, yet then it must be more in the lesser Vessels and Openings than in the larger. But we must not, as some doe, extend it to a red hot Iron.

Riverius.

Wedelius.

XXII. Some things stop blood, as Vinegar, and Spirit of *Vitriol*, in bleeding at the mouth, after opening a Vein, &c. So White *Vitriol* and *Alume* may, for the same reason, doe good, for they have a confipating faculty also. But we must not trust sharp things alone.

Idem.

XXIII. If a powder or liquor must be put into the Nostrils, let the Mouth be kept full of cold Water, especially when the Medicine has a caustick virtue in it, lest any of it might fall down through the Palate into the Mouth. And the Patient must lie backwards with his head. But if the Nostrils be stoppt, and the blood run down the Gullet, the Nostrils must be cleared, and let him hold cold Water in his Mouth.

Sennertus.

XXIV. The snuffing up of *Roses* and *Myrtles* is much suspected by me, as all other powders should be avoided for fear of Sneezing; in stead whereof the space between the Eye-brows, should rather be anointed outwardly with Oil of *Mars*.

Ferd.

XXV. Among Liquids, a solution of *Vitriol* made in Spring-water is not only chief, but may serve for all the rest. Some commend it for a great secret, and a most certain stopper of blood. Indeed, this same applied to a green wound, inasmuch as by corrugation, it closes up the extremities of the torn vessels, powerfully stops the bleeding. But this application in bleeding at the Nose, where the blood being brought to the Mouths of the Arteries, should be received by the Veins, inasmuch as it equally, or rather more, stops the Veins than the Arteries, it often does little or no good, as I have often found by experience. But indeed seeing water

ter put into the Nostril does not sufficiently stick to the Mouths of the Vessels, but is washed off by the blood, as it comes out, before it can exert its virtue, therefore it is more expedient, either to snuff up a Styptick powder, or to thrust a tent dipt in Vitriolick Water, or by it self, or filled with some astringent powder to the root of the Nose. I often use either *Crocus Martis* calcined very red, or powder of Vitriol camphorate, or the Vitriolick Soot, scraped off the bottom of a Brass Kettle, the dust whereof I have often tried with good success in this case.

Willis.

XXVI. The use of that Styptick Liqueur, which a Frenchman three years ago carried all over Europe, is at this day very well known. We have reason indeed to commend the invention in wounds made by a cut, but in a prick we find it not so beneficial. Besides, I have often found it useless in stopping of bleeding at the Nose, that is, where the sides of the wound can touch every where, it is of value; but that otherwise it is dull, the following example does shew. One was wounded in a Duel in the inside of his right Arm, a little above his Elbow; The Sword had made a large and deep wound, to the very Arm-pit, having cut the Artery also. The Chirurgeon dressed the wound till the eleventh day, when, all on a sudden, the blood burst out in such abundance, that the Patient swooned. Therefore he used the Styptick-water, which being for several days now and then injected, the blood at length stopt; but Convulsions followed, his Arm swelled, and he died the eighteenth day. When his body was opened, the Artery was then indeed found open, but the passage which the Sword had made, was stopt about the Artery, ^{com.} the clots of blood, which the Styptick-water ^{ing.} he made, so that the blood could not come out. ¶ In the year

Borrichius.

1677. in the Month of December, I saw it used for a bleeding at the Nose; whereby the blood stopt indeed, but attended with terrible Symptoms. A Maid 18 years old, a Merchant's Daughter of Geneva, by name *Voltaire*, fell into a continual Fever, she had in 24 hours two Fits; the second day she had a bilious *Diarrhoea*, with bleeding at the Nose, whereby she lost two pounds of blood that day. I was called the third day, and in my presence two Pottingers were filled, within an hours time, each of which held nine ounces: I order a Vein to be opened in the Arm, glutinant things to be applied, Linen clothes wet in *possea* to be laid round the neck, &c. When all things were in vain, and the blood ran full stream, a Chirurgeon thrust a Cotton-tent, wet in the foresaid Water, into her Nostrils, upon which indeed the blood stopt, but a violent Head-ach followed, and a great dulness at the bottom of her Forehead, and the Fever grew higher: but after bleeding her in the Foot, cupping and scarifying her in the back and loins, bleeding her with Leeches in the forehead, under the ears, and in the temples; the eleventh day the Fever, Head-ach, and oppression of her Lungs, wherewith she had been troubled, ceased. Hence it is clear a hæmorrhage may not rashly be stopt, and rather by Repellents than Stypticks.

XXVII. A tent made of the common, broad, flat, ischaimous fungus put into the hollow of the Nostrils to the place of the wound, stops all bleeding in a moment, like an enchantment. This singular administration must be observed; a tent is made of it, with this observation, that the smooth part must be turned inward, and the spongy, dusty part outward, a thread must be gently tied to the lower part, and hang out a little: thrust it into the Nostrils by degrees; If respiration be hindered thereby, then a Goose-quill may be put in the middle of the tent, and so both ends are answered.

Rolfingius,
conf. 2. lib.
3.

XXVIII. A robust and plethorick young Man, upon lying with his Wife in the heat of Dog-days, was taken with a violent bleeding at the Nose: After

having tried many things in vain, since he was in danger from the heat of his blood, I ordered him to be dipt in a Kettle of cold water; so the blood being cooled and thickened, the bleeding stopt by degrees.

Hildanus,
cent. 1. obs.
17.

XXIX. Mr. N. was subject to an hæmorrhage, till he was thirty years old, and he was grown so weak and lean, that he was very nigh death. He was at length cured by drinking Wine moderately; for he had been abstemious, and so he came to be an old Man: For he had been over much cooled by drinking of Water and Bleeding.

Borellus,
cent. 2. obs.
87.

XXX. I saw a most contumacious bleeding stopt in the most illustrious N. by the intervention of a Swoon (whereby the blood and Spirits are powerfully retracted to the inner parts.) He, when no remedies did him any good, said he had occasion to go to stool, as he arose out of his bed he swooned, out of which, after he came, the blood ran with far less violence: And after half a drachm of *Sal Prunelle* in cold water had been given him, the bleeding wholly stopt. This Remedy is propounded by *Hippocrates* 3. *Epidem.* 7. Concerning which *Galen* says, it must be observed, 5. *meth.* 5. that swooning does good onely, when the blood runs out at veins, which end in the *Superficies* of the body: for when it comes from the inner veins, as in spitting of Blood, the immoderate coming of the *Menses*, or in wounds of the inner parts, it will rather increase the bleeding; by retraction of the heat to the inwards, and to those parts whereout the blood runs.

Riverius.

XXXI. One was taken with a Bleeding, which no Medicines would stop; at length, when he was put into a great fright, it stopt. I ordered, that he should be vexed, and when he was fretted, that a great Basin, full of cold Water, should be thrown upon his Back, with a great noise: hereby he being immediately put into a Fright, the blood stopt.

Panarolus,
cent. 5. obs.
27.

XXXII. *Fab. Bartoletus* Professor of Mantua, relates, how a desperate bleeding at the Nose was stopt, to a miracle, while he was present, by a Sieve-maker, within half a quarter of an hour, onely with violent squeezing between his fingers, the interstice between his Nostrils. *Thuanus* also relates, how the desperate bleeding of a wound was stopt, *lib.* 75. *hisor.*

Rhodius,
cent. 1. obs.
91.

XXXIII. A Nobleman having been troubled with frequent and violent eruptions of blood, sometimes at the fœdal Veins, sometimes at the Nose, after several Venæsections, taking of Juleps, and cooling Decoctions, &c. at length, by taking the following Powder, a dose whereof he took in a Julep every sixth hour; Take of Male-Pœony, red Coral, Pearl, each 1 drachm, Ivory, Hartshorn, Bloudstone, each half a drachm, *Lapis Prunelle* 1 drachm. Make a Powder. The dose half a drachm. Take of Water of Black Cherries 8 ounces, Balm, *Cinnamomi hordeati*, each 2 ounces, Treacle-water 1 ounce, Syrup of Corals 1 ounce and an half, making Ligatures in certain places, as is usual, and then in others, according to occasion, both to quiet and to intercept the spasms of the Vessels, was cured quickly without any relapse afterwards. For I found the Disease to be merely, or chiefly spasmodick; for every day when he bled, his pulse was weak, his extreme parts cold, and all his Vessels fell flat, as if they had been too much emptied. Moreover, the Patient was troubled with a *Vertigo* almost continually, and a tremor of the heart, and a Swooning now and then, or with the fear of it. Truly the blood was so far from bursting out of the Vessels, through too much plenitude or turgescence, that rather on the contrary the Current of it ran so low and small, that it was scarce able to maintain the flood of Circulation. Notwithstanding (which was the very truth) he often in a day felt something in his body, to creep fast, like wind, sometime upwards, sometimes downwards, and oftentimes bleeding at the Nose, or hæmorrhoids,

N n

followed

followed the tendency of that motion; so that hence one might easily conclude, that the motive fibres of the blood-vessels, whereby they are contracted, being affected with a spasm, did inordinately hurry the blood, how low soever, thither, and now and then forced an eruption.

Willis. XXXIV. Things doe good that cause an Eschar, as *Colcothar*, by which remedy alone the most illustrious the Prince of *Orange*, was recalled from a fatal bleeding. He every day bled a vast quantity of blood at a wound which he had received in his jugular Veins, and it could be stopt by no remedies, but by a tent wrapt in a digestive, and good store of powder of *Colcothar*, which was thrust into the Wound. By *Colcothar* I mean burnt Vitriol.

Heurnius. XXXV. I have read in the Dutch History, that a wound in the jugular Vein of his Excellency *William* the First, Prince of *Orange*, was closed, by laying a finger upon it, and so the blood stopt. This artifice was, of old proposed by *M. Gatinaris*. Pressing Irons may serve instead of Fingers.

Van Horne. XXXVI. When a Man had in a fit of the Falling Sickness bit his Tongue where the Veins are large, so great a bleeding followed, that it could be stopt by no remedies, and his strength was so low, that he was ready to dye. A famous Chirurgion made a Pill of Wool, and dipt it in Goldsmith's Water, and thrust it with a Probe into the Wound and Vein where it was open, and within a little while the blood totally stopt.

Paterus. XXXVII. Truly the application of a red-hot Iron, after mutilation, is a horrible thing; wherefore I propose a remedy, which stops bleeding as if it were by Inchantment: It is onely Alum, of which little Tents are made, and after cutting off the Limbs, they are thrust, as far as they may, into the orifices of the greater Veins; and then the business is finished with the application of many *Splenia* and astringent Powders. So there was one who could by no means stop the bleeding of a Vein in the Arm, which I immediately stopt onely by applying Alum.

B. rellus, c. 1. 4. obs. 50. XXXVIII. To stop Bleeding, even when the Arteries are cut, nothing is better than *Galen's* Plaster, made of Aloes, Frankincense, Hare's Down most exactly powdered, and mixt with the White of an Egg, wherewith the Wound is filled to stop the Arteries. But if it stop not with this most pretious remedy, 4 grains of *Sperniola Compositum Crollii* may be given with good success, and about the neck (for a Wound of the Temporal Muscle, &c.) a Plaster may be applied, of which *Johnston* makes mention, *Id. Med. l. 8. tit. 6. c. 2.* made of Furnace Clay, and sharp Vinegar of Roses, spread upon a Rowler four inches broad, and as often as it is dried, renewed, till the bleeding stop: And oftentimes it stops within half an hour, or sooner, to a wonder. I thought good to take notice of these three remedies, because they stop every deplorable hæmorrhage.

Willis. XXXIX. Chalybeate Waters may be drunk for a month, than which, in this case, there is not a better remedy.

XL. Among other Symptoms, that are produced by the hypochondriack Disease, and the Scurvy, frequent bleeding at the Nose is not the least. A Scorbatick Man 55 years old, being afflicted with various scorbatick Symptoms, was at length taken with a great bleeding at his Nose, which, by often returning, did very much weaken him; all things were in vain; that therefore the too fluid and sharp Serum of the blood might be tempered, and the separation of it from the rest of the blood might be hindered, I gave him Spirit of Vitriol, mixt with Essence of Violets, to moderate the acidity. The business was immediately done, and now the Disease has tarried away these two years. Two other Hypochondriacks, when one of them had every morning a rising of humours from his stomach, and the

other had a bleeding at the Nose at uncertain times, found benefit by the same Medicine. But in a double Quartane, inclining to a Dropie, accompanied with bleeding at the Nose, the blood being ebullient in every new Paroxysm, this Medicine proved not altogether so successfull; nevertheless, by little and little, the bleeding at the Nose gave over. Therefore praise is due to these Acids, because they coagulate a Blood too fluid, and attenuate it, when grumescens.

Wedelius, Misc. cur. ann. 72. obs. 106.

XLI. I will here reveal to Candidates in Chirurgery a singular secret concerning Comfrey-root, of which *Tragus* formerly made mention, but very briefly; namely, the Root of Comfrey dried and powdered is dissolved in warm Spring-water, and well shaken together, till the water grow a little clammy with the viscosities of the Comfrey. Which most simple Medicine skilfull Chirurgions prefer before many other Compounds, both for bleedings, and fractures, and dislocations. But if with these powdered roots you mix the White of an Egg, or Bole Armenick, the mixture will grow grumous, the Bole consuming, or as it were imbibing, the glutinous part of the Comfrey.

S. Pauli.

XLII. *Laudanum Opiatum* is a most present remedy for bleeding, as well inwardly to stop the ebullition, as outwardly dissolved in some liquor, and snuffed up the Nose. I gave a Man that was ill of a Symptomatick bleeding in a malignant Fever 3 grains of it in conserve of Roses, with good success.

Hortius, l. 10. obs. 3.

XLIII. Narcoticks in Bleeding must be used with great prudence, and not, but upon urgent necessity: For they extinguish the innate heat, and fix and coagulate the spirits about the Membranes of the Brain, whence comes an Apoplexy, and an interception of the vessels and vital Spirit between the heart and the brain.

H. Petrus, Nosol. Harmon, p. 239.

XLIV. Ischaïmous Medicines are most proper for a simple hæmorrhage; for a complicate one *secundum quid*. So they are proper in hæmorrhages of the Nose, Wounds, Arteries, the *Menses*, Hæmorrhoids, Spitting of Blood, making of Bloody-water, Dysentery, &c. But if any other special Disease be joined with it, that limits the use of them, and we must look to it principally. So a Dysentery, and a Bloody-water after the Stone, require a proper Medicine for themselves, not absolutely things that stop blood, but with respect to the Stone, and to other causes also, which when they are answered by their proper remedies, the bleeding it self is also stopt. And besides, it is evident, they are not proper for any bleedings at all, to any other end, than when they primarily indicate astringent; as for example, it would be a foolish thing in a Pleurisy or Spitting of Blood, to stop it; The reason is the same in other cases.

Wedelius, de S. M. Jac. p. 237.

XLV. Hither also may be referred the violent stopping of the Nose: for by it in this case nothing farther is done, than that the blood regurgitates into the Mouth: And therefore this is the same, as if one would repress the violence of fermenting Must by stopping the bung of the Vessel. It were better to remove and precipitate the Orgasm; which being removed, it is easily stopt.

Idem.

XLVI. Some tye a piece of Silver-money upon an Artery wounded in the Wrist: Yet this Ligature, which must be very strait (for a lax one does not at all stop the bleeding) seems to be very dangerous, for fear of a Gangrene in the hand, and Mortification allowing thereupon. Wherefore I think Mens safety might be better provided for, if all Chirurgions (in fortuitous Wounds of the Wrist, or in opening the Arteries there on purpose) had an instrument in readiness, made of several plates of Iron, perforated with several holes, that cotton, and a linen cloth over it may be quilted into it, and fitted to the Arm like a sleeve, and that it may open and shut. This, by strongly com-

Willis, obs. 50.

compressing the cut Vessel, with its umbellated Screw, stops the dangerous flux of Arterious blood. In my time there lived at Padua an experienced Arteriotomist, who, for the cure of violent and pertinacious Head-aches, did often, by the advice of Physicians, open the Arteries of the Wrist with very good success, and having taken away the quantity of blood prescribed, and compressed the wound so close with the said Instrument, that not one drop of blood came, nor did any mischief supervene, which might otherwise have been feared, from the violent compression of the vessels. If therefore, contrary to the expectation, either of the Chirurgion or the Patient, an unskillfull and rash Barber, should cut, in stead of the Basilick Vein, the Artery that accompanies it, whence oftentimes either life flies out with the blood, or an Aneurism arises, which being ill handled may be the cause of Death; I advise, that beside the remedy proposed by D. Greg. Horstius Chirurg. Observ. 1. an instrument be applied to the Artery hurt in the bending of the Arm, with a Bill like that for the Wrist, which has immediately stoppt the bleeding by compressing the Artery, and has safely hindered the breeding of a dangerous Aneurisma. I, in defect of such an instrument, have applied a whole Peach-stone, and tied it fast down upon Arteries, that have been wounded through imprudence, with good success. In Switzerland they compress Arteries, that are broken or cut by chance, or art, with the convex woody shell of a Walnut, and with success.

Sculetus.

XLVII. If Blood come from the Arteries, the cure is very difficult. First therefore, let us by Venæsection hinder the Blood from coming into the Artery; for so the violence of the flowing Blood is stoppt: Then let us stop the Artery, upon which the greatest difficulty in the whole business depends; for we can either touch the place where the Artery is, or we cannot: If we can touch the Artery, then we press and close it with the finger; So in Bleeding at the Nose, we stop the Bleeding by pressing the jugular carotid Artery; or, if we can make a Ligature, we have recourse to it. But if we cannot touch the place where the Artery is, we use Coolers in the Vessels, and Astringents to the flesh. So P. Borellus, cent. 1. obs. 95. wraps a linen-cloth, wet in cold water, about the stones, and after Venæsection touches it only with Alume, or Colcothar, cent. 4. obs. 7. Hartman, if he can come at it, ties the Artery with a silken-thread, afterwards he fills the aperture with Colcothar, and closes it with a decent ligature over Emplastrum Diaphanum for several days: Then, to prevent all putrefaction, he sometimes foment the part affected with clothes wet in a hot Lixivium of Lapis Salutis.

Frid. Hoffmannus.

XLVIII. Although most stop Blood, after an Arm or Leg is cut off, with red hot Irons; yet Paulus Marquardus Slegelius has observed, it should rather be done by astringent powders, because, when the ends of the Veins and Arteries are burnt, the Blood cannot so easily find a way for to keep its motion, which it has, as it were in a circle, whereupon a Gangrene arises. Hence it came to pass, that in his time in Paris, in the Hospital, which they call le Hôpital Dieu, of five Men, whose Arms and Legs were cut off, onely one escaped, who was not feared, but had Bonetus, a most experienced Chirurgion, his powder applied; Take of Bole-armenick, Dragon's blood, Gypsum, Terra sigillata, Aloës, Mastick, burnt Galls, each 2 ounces, common-bole 4 ounces, fine Flower 3 ounces, Pitch, Rosin, Blood 2 ounces, Myrrh 1 ounce and an half. Make a powder. Yet I have seen searing used successfully at Padua.

Velschius, obs. 90.

XLIX. An actual Cantery is the last remedy, because, by sudden Burning, if it can touch the Veins, or the Arteries, whence the Blood comes, it stops the Bleeding. And this is done with a red-hot

Iron, made according to the wound; and the end wherewith it must Burn, must, if the place it is put into be narrow, be sharp, as into the hole where-out a Tooth has been drawn; or it must end in a round knob, which must be greater, or less; or it must have a broad superficies in large broad wounds. For which reason, in limbs that are cut off, they use to Burn the Wound with a broad Plate: Which yet sometimes has but little success, especially if Section be made in a thick and fleshy part, because this Burning does not touch the Orifices of the Vessels that are cut and retracted, but onely touches the flesh; and in that time, before the Plasters be applied, there is a great loss of Blood.

L. Galen 5. aphor. 30. advises us to prevent Bleeding, especially by taking away of Blood, towards the beginning of Spring, which if the Patients refuse, they must be purged with Physick that purges all humours: for so the carrying off of humours, the Blood especially, will follow as we would wish; for, by opening a Vein, and taking away but two ounces of bad Blood twice a year, we may gain some pounds of good Blood. For the operation of irritated Nature is not safe, who, when the vessels are opened, cannot tell how to keep any measure, as the Physician does; who moreover, when he purges by Art, does not make a custom of it.

Fortis, conf. 22. cent. 1.

LI. The Question is, Whether they that Bleed, must be kept in Bed, or up? Without doubt the weak, and they that are subject to frequent Bleeding, must not be raised, unless perhaps to try to cure them. As for them that are not so weak, I think we may thus determine. They whose stoppt pores hinder the Blood from transpiring, because the Blood is more apt to be raised into great and eruptive turgescencies by the heat of the Bed, it is expedient for them not onely to tarry up, till they leave off Bleeding, but to be cooled by external applications in the whole habit of the Body, or in most of the parts. Wherefore Fabricius Hildanus relates, how one was taken with a violent Bleeding at the Nose, whom he could not cure by any ordinary Medicines, which he had tried to no purpose: but that he quickly cured him, by plunging him into a Kettle of cold Water. And with the like success Riverius took one, that was held in the same manner, out of his Bed, ordered him to be set on a Carpet upon the floor, and fomented his Body all over with clothes dipt in cold Water. Yet this method is not proper for all Men, nor at all seasons alike; but on the contrary, it is convenient for them, whose Blood is halituous, and has more open pores, easily evaporates, and uses to dissolve into Sweat, with a moderate ambient heat, and therefore is more sedate, to be kept in Bed, not onely when they Bleed, but when they are like to Bleed. Truly this is the reason, why several, that are subject to Bleeding, live free from it all Summer-time, when they freely transpire: But when the Winter Cold nips them, because their pores are shut, they have frequent and dangerous fits of Bleeding.

Willis.

Medicines especially made use of by eminent Physicians.

1. Make a piece of Milstone red-hot, quench it in Vinegar, hold their Nose over the Smoak of it, Arius, and so you may stop their Bleeding.

2. Shepherd's-purse, if it be bruised with the White of an Egg and a little Vinegar, and applied to the Forehead, presently the Blood is stoppt, as I have often found by experience.

Bartolius.

3. A Nobleman told me, that the Moss taken off Tiles, steeped in Vinegar, and applied to the crown of the head, is good; and nothing is better than Darnel-root, which stops Bleeding to a Miracle.

4. An admirable remedy for Bleeding; Take of the leaves of Nettle, bruise them, and wet them with Water distilled off Nettle. This applied to the Soles of the Feet and the Palms of the Hands, produces wonderfull effects.
- Borellus.
5. Four drops of Oil of Mars in a draught of Wine presently stop Bleeding.
- De Bcy.
6. This is a most efficacious powder, to snuff into the Nose; Take a new Sponge, wet it in strong Vinegar, cover it with Tar, then burn it in an Earthen pot.
- Claudinus.
7. The stone of Carps powdered, and applied with the Down of Quince-apples, is highly commended.
- Crato.
8. Powder of dried Blood, with Bean-flower blown in, or applied, exceeds all credit. ¶ This powder wonderfully stops the Blood of Wounds; Take of Sheep's Blood dried and powdered 4 ounces, Crocus Martis, red Colcothar, each 2 drachms. Mix them, and strow them on Wounds.
- Deodatus.
9. Powder of a Toad is very good for the terror of the Archæus, which is a most certain remedy. ¶ Red Vitriol is good in a pertinacious hæmorrhage, which put into the Nostrils in the manner of a Tent, makes a crust like a Cautey.
- Grembs.
10. The Down which is found in Poplar-Buds, if they be pluckt in May, and laid in the shade, till they be dilated, and give a Down like Cotton, does wonderfully stop all Bleeding.
- Eustach. Rhudius.
11. The black Excrefcences appearing in Rye-Ears, if three or four grains of them be taken, stops all Bleeding.
- Stockkerus.
12. If a red-hot Iron be held under the Nose as it bleeds, so that the vapour of the Burnt-blood may ascend to the Nose, immediately the Bleeding stops.
- Willis.

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The Abuse of Clysters hurtfull for such as are subject to the
Piles. XXXVI.
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Medicines.

I. I Remember, when I had the most illustrious
Ann Countess of Waldeck, of the family of
the Duke of Cleves, under cure, for a most grie-
vous and tedious Flux of the hæmorrhoids; and
when I saw that her strength was wasted, and her
spirits spent, and so, that she was in great danger, I
stopt them. But though she was refreshed the first
day thereby, yet she was wonderfully oppressed on
the following days, and she began to swell and puff
up about her heart. When I was called on the sixth
day, I was forced to open the veins, and make the
hæmorrhoids bleed again; nor could I with any se-
curity close them, till I had provided for the body
by gentle Evacuations, and for the Liver, with
other things that are alterative and corroborating.
Therefore here we must act dexterously, lest we
leap out of the Frying-pan into the Fire.

II. Because oftentimes there is no less danger
when they are too much stopt, than when they run
too much, especially in such whose custome it has
been to be purged that way at set-times, and we
must have a care they be not stopt longer than is
convenient; therefore it is proper to let Blood in
the inner veins of the Legs, about the inner An-
kle, or in the veins under the Ham: for, by open-
ing them, the suppressed Piles are provoked, accord-
ing to Galen, l. de V. S. But if the Body do not
appear very much oppressed, nor any danger as yet
seem to be feared from the suppression of them;
yet it is good to provide for, and to take care of
Mens health, lest some Disease breed by their be-
ing too much stopt: It will doe good sometimes
to open a vein in either Arm: for so you will pre-
vent the necessity of the hæmorrhoids, the cause,
that is, of that Flux, being in some measure re-
moved, and you will abate Nature's pains in bringing
them at certain times: and you will avoid some
inconvenience which may happen. ¶ For the cure,
some teach, that, according to Galen, a vein must
be opened in the Foot, because the opening of this
vein provokes the hæmorrhoids. In which matter
the Physician must not be too hasty, a plenitude of
Blood continuing, because by this Bleeding, the
Blood often falls with such violence upon the
lower parts, and especially the part affected, that
a worse Disease follows; and hence I have seen in
such a case great Inflammations, and sometimes
Gangrenes also have followed. Wherefore, the
plenitude remaining, not the lower, but rather the
upper veins must be opened. And this must be ob-
served especially, when there is an intention one-
ly to allay pain, and not to provoke the hæmor-
rhoids; for where no intention is to provoke them,
it is safer, in every case, to open the upper veins,
and the rather, if we have a mind to stop them.

III. In a preternatural running of the Hæmor-
rhoids, although a Vein must be opened in the
Arm, because the Fluxion which tends to the
Head may be drawn back by opening a Vein in
the Legs; so that which tends to the Feet or Anus,
by opening a Vein in the Arm. For if the Blood
run impetuously by the Arteries to the lower
parts, and a Vein be opened in the Arm, the Blood
cannot chuse but be carried with less violence
to

Hæmorrhoides, or, The Piles.

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to the lower parts, for want of Blood, that is, if a good quantity have been taken by venæsection. And since it has an easier exit, where a Vein is open, the Blood must necessarily run by those Arteries rather, which are soonest drained by the opened Vein, than by them out of which into the Veins there is not so ready a passage; and so the Blood which before ran by the Arteries downwards, when a Vein is opened in the Arm, and the course changed, must needs tend upwards to the Arm, by the branches of the upper Arteries. Yet we must observe, if there be an Inflammation already in the Hæmorrhoids, then we must bleed rather in the Leg than in the Arm, because in this case we have not so much regard to the humour affluent, as affluxed, which wants evacuation and derivation.

Bleeding by venæsection will then be convenient, when the excessive Flux of the Hæmorrhoids proceeds from redundance of Blood in the Mesaraick Veins, for though Blood do not then run out of them by opening a Vein, because these Veins nowhere reach to the Skin; yet, because the *Vena cava*, being in some sort exhausted of the Blood by it, draws Blood out of the Mesaraicks, by the means some evacuation of it is made thence also by revulsion, and especially by plentiful bleeding in some patent Vein in the Arm or Hand: Or also by opening some apparent or manifest Vein in the Leg or Foot, the taking of Blood out of which does not provoke the Hæmorrhoids, as it does the *Menses*, because these Veins are not continued with the hæmorrhoidal Veins, as they are with them whereout the *Menstrua* come, and therefore not by attraction, but, as I said, by revulsion; in this Blood-letting the Hæmorrhoids are rather stopt than provoked.

Platerus.

IV. There are some that open the Hæmorrhoids with the point of a Knife; but some bleed immoderately, and the Blood will stop with no Remedies: Besides, the Wound made with the Instrument becomes cacoethick. Leeches cleansed from their slime should be preferred; but before they are applied, the Skin must be mollified and attenuated with an emollient fomentation: for so they easily wound the part. If they refuse to fasten on the place, it must be smeared with Hen's blood.

Enchirid.
Med. Præf.

V. Hippocrates, 6. Aphor. 12. says, that in the Cure of old Hæmorrhoids, unless some one be kept open, there is danger of a Drop sic or a Consumption impendent. Therefore *Ætius* must not be heard, who says, they must all be healed up: For if a true preparation of the body be made before the Cure, and if a due course of Diet be kept afterwards, there will be no fear of a Consumption or Drop sic, or any great Mischief: But if one be kept open, it cannot be called a Cure. And nevertheless it will afflict: for the prudent old Man, let *Ætius* doe or say what he pleases, will have one kept open: for 4. acut. l. 126. where he proposes the Cure of the Hæmorrhoids, he says, "You must always keep one open, afterwards you must purge with Hellebore, then let him be exercised, and sweat, and be much rubbed: Let him vomit thrice a month, let him drink yellow Wine, austere, watry and little"; In which words he shews the way how to avoid dangers, although one be kept open. And they are not to be regarded, who reconcile *Ætius*, saying, that where the Flux is melancholick, one should always be kept; but where it is pituitous, then all of them may be cured: seeing the Blood that comes by the Hæmorrhoids offends either in quantity or quality; and what way soever it comes, unless one be kept, there is great danger of Life; and though one be kept, that afflicts much less than more would. ¶ A dogmatick Physician should have the scope of urgency, which exceeds all, eternally in his memory: wherefore if they have bled immoderately, both long and much, then the Bleeding must be stopt, because

Fonsæca,
conf. 27.
tom. I.

he is in danger of dying suddenly, for Life consists in Blood; therefore it must be stopt presently; for all excretion of Blood is *totò genere* preternatural, and if sudden Death do not follow, a Drop sic, Cachexy, &c. will follow. What therefore should we stand upon, when the strength is brought low, and the Patient feels himself sensibly hurt, and especially when the Blood runs out of the external Veins in *Ano*? For there are two branches of Veins near the *Anus*; some internal, or in the coats of the *Intestinum rectum*, arising from the branches of the *Porta*, that is, from the anous Vessels allotted to the Spleen, which are the evacuations of the Cacochymie and seculent Blood: Others are external, which are in the Muscles of the *Anus*, and derive their original from the *Vena cava*, which evacuate a *Plethora*, and pure and laudable Blood. If therefore the Blood be superfluous, and voided by the external Veins, and is not black, as that which comes from the internal Veins, then it must be stopt by all means, for the abovesaid Reasons. But if the Blood that is yet voided, be much, come from the internal Vessels, and be black, what must be done? Whether must all the Veins be shut, or one left open? If this superfluous Blood come from the internal Veins, and be black, not of many years continuance, nor accustomed to the Man's nature (because what things Men are accustomed to, are almost natural) and in the beginning of a full Age, they may all be shut, whether the Patient have two, three or four, or but one: for it is very likely the inner Bowels have contracted no contumacious and notorious hurt or intemperature, and especially if the Man have not been ill of melancholick Diseases; yet so as that every year, at certain times, he refuse not to bleed and purge, and to keep an exquisite and curious course of Diet. On the contrary, if this Flux be inveterate, and hath been of an old standing, then they must not all be shut by no means, but one must be left open. For no Man can inviolably use so curious a course of Diet, Bleeding and Purging, but the reliques of a fierce melancholick humour may be bred again in the Body, since in chronical Diseases there must ever of necessity be great intemperatures in the Bowels, and rebellious and contumacious hurts; Wherefore without doubt there will be a greater portion of the melancholick humour, which will breed afterwards more and more, than it is possible by the efficacy of Art to evacuate wholly, seeing Mens dispositions are such, especially in our times, where greater errors by far are committed in Diet, than in ancient times. And if Hippocrates would always have one kept open, why may not the same be done in our time?

Epiphanius
Ferdinandus,
Hist. 6.

VI. If the Flux be grievous, the inner Vein of the Arm may be opened, which is a ready and effectual Remedy. If the Flux have lasted long, and spent the strength, lest there should be a sudden loss of spirits, it is good to bleed a little at several times, so the strength will be less prejudiced, and the revulsion will be more evident by iterated retractions.

Solemander.

VII. In a Man, who had had an immoderate Flux of the Hæmorrhoids for four years, I endeavoured the suppression of it, that so, not onely what was troublesome might be suppressed, but also that the good Blood, the treasure of Life, might be stopt, not regarding the Tales of those Physicians, who talk that they can set bounds to this Flux, as if, at their pleasure, and when there is occasion, it were in their power to open or stop it; while in the mean time they cast their miserable Patients into Cachexies, Atrophies, Drop sies and Death. Nor are they less to be derided, who, persuading themselves that they can defend Hippocrates or Galen's opinion, do not onely suffer the Flux of melancholick, thick Blood, for whose sake at the beginning Nature uses to raise the Hæmorrhoids, but

of

of the good also, as in process of time it very often, yea always, happens; except in a few, who at set times are moderately purged by the fecal Veins, and thereby are preserved and defended from very many Diseases enumerated by Hippocrates. Others also have interpreted Hippocrates foolishly, who, *Aphor. 6. 12.* seems to advise them that would heal this inveterate Disease with a surgical Hand, to keep one open (which yet he does not mention *lib. de Hæmorrhoid.*) wherefore they have Revellents, Incrassaters and Astringents in suspicion, as if they thought it were an easie matter to stop this evacuation. But because I have observed in my Practice, that strong Remedies did little good, and gentle ones none at all, I use all the Apparatus of Medicines to suppress it, yet so as it be not moderate, periodic, of thick and melancholick Blood, nor troublesome to the Patient; because from such the Patient rather finds relief than detriment. Of which excellent Doctrine, not I, but Galen is the Teacher, who, *4. Aph. 25.* says, that for Blood to be voided upwards, whatsoever it be, is bad; but to bleed downwards, by the Hæmorrhoids, is good; when black stuff is voided, that is, when the Man's nature gathers abundance of such humour. Otherwise we must not rashly accustom our selves to evacuation by the Hæmorrhoids. For either excess is accounted dangerous, both when Blood is voided above measure, and when it is totally stopt.

Fortis, conf.
100. cent. 2.

VIII. It ought to be observed, that they are in a gross error, who in an excessive Flux of the Hæmorrhoids from the Vessels being opened, do set Cupping-glasses to the Back-bone, and several ways draw from the Hips to the Neck or Shoulders; thinking by these means the Blood will be retracted. Whereas by these means, granting the circulation of the Blood, more Blood is drawn to the place affected, and the Vessels are opened, by increasing the Flux of Blood in the greater Vessels, which being afterwards quickened at the Heart, increases its Flux in the Arteries. ¶ Scarifications, Cuppings, Ligatures, Frictions, although they be proper for Revulsion in other Hæmorrhagies, wherein the Blood comes out of the Branches of the *Vena cava*; yet here, since they can neither exhaust the Blood out of the *Vena cava*, nor derive it from the Mesaraicks to any other place, they will doe little good.

Frid. Hofmannus.

IX. Fernelius, *lib. 6. de Part. morb. & Symptom.* c. 10. has observed, which I also have observed, that sometimes there comes out of the *Podex*, without Pain or Blood, some mucous or whitish Filth, which some mistake for Pus. He thinks it is as it were the Slime and Dregs of melancholick Blood, which the fecal Veins do void a long time, commonly after tedious melancholick Diseases, and hard riding. Platerus writes, that this comes the same way, as Womens Whites: That, like as in Women Nature rids her self of that white matter by the menstrual Veins, so here she does it by the hæmorrhoidal, of a matter not unlike the white tenaceous Menstrua.

SenDertus.

X. These Veins are not all of them of one sort, as has hitherto been believed by many, but some are internal, arising from the *Porta*, others external, from the *Cava*, to which the hæmorrhoidal Arteries are joined, by which the humours to be evacuated are carried. Onely the internal were known to the Ancients, commended as in splenick and melancholick Diseases, and as if they might be opened about the *Podex*, or Leeches might be applied to them; whereas no Branches of the *Porta*, that lies within, do reach the Skin, which may be cut. They differ, 1. In their original, for the internal come from the *Porta*, sometimes from the splenick Branch, whence comes the *Vas breve*: The external from the hypogastrick Branch of the *Cava*. 2. In insertion, for the internal are inserted into the substance of the *Intestinum rectum*: The external into the muscular substance of the *Anus*. 3. In number, the in-

ternal is one: the external three. 4. In the qualities of the contained Blood, the Blood of the internal is thick and black: of the external, thin and red. 5. In their use, the internal empty the *Porta*, and help obstructions of the Spleen: the external do empty the *Cava* and Liver by accident; but primarily the great Artery and the Heart: yea, their evacuation cures sanguine Diseases of the Head, Breast, &c. which Hippocrates also mentions in his Aphorisms; hence the internal are said to cure a Cacoehymie, the external a Plethory. 6. In profusion of Blood, the Flux of the internal is not so plentiful: of the external, so great sometimes, that Death or grievous Diseases do follow. 7. In evacuation of the external there is no pain or griping in the Belly, sometimes also no pain in the *Anus*; which in evacuation of the internal do afflict. 8. Arteries do not accompany the internal Veins: the external Veins descend to the Muscles of the *Anus* with the Arteries; therefore these are more rightly called hæmorrhoidal Vessels.

Tho. Bartholinus, li. bello 1. ca. 4.

XI. We often see thick and black humours evacuated by the Hæmorrhoids, that run spontaneously. But we must know, that this Blood comes not from the Spleen, but from the Plethory of the whole Body into these Veins, and is discharged as into the more ignoble parts; where, if it tarry, it may easily fall into corruption and putrefaction, so that it looks like a sort of Imposthume, and these Hæmorrhoids seem to be a kind of Varices.

Walrus, Met. Med. p. 86.

XII. Hippocrates, *lib. de Vict. acut.* and *lib. de Hæmorrhoid.* propounds Tying, Cutting and Burning, saving one open, which operation, as being very laborious and exceeding dangerous, is grown obsolete in our times. Yet Massoria says, he once saw this operation, the History whereof it may be useful to describe, because from thence the manner of operation and the event will appear. Fredericus Corsicus had been ill, first of a Pain, then of an immoderate Flux of the Hæmorrhoids: And when he had tried many Remedies in vain, he at length betook himself to *Padua*, where the Physicians by common consent resolved, that the Blood must be stopt by manual operation. A Neapolitan Chirurgion, who professed that thing, was called. The Hæmorrhoids were cut, tied and burnt. The sum of the operation is this: First, they conveniently bind the Man, then they excarnate the extreme heads of the Hæmorrhoids, how many soever they be, and gently separate them from the Intestine, then, with a certain proper strong Needle with a Thread, they perforate them all almost to the end, and tie them strait and few them, when this is done, they clip off the part of the Veins which is above the Suture and sear it with a red hot Iron: Truly, a very painfull and tiresome Work, what with the Ligature, Section and the Burning. A Fever and great Pain came upon Frederick, but the Chirurgion using some of his own Remedies, he, in a few days, was free from his Fever, Pain and Hæmorrhoids, to the admiration of many. But it must not be omitted, that he, being over confident of himself, did not onely omit Bleeding and Purging, but kept no good Diet, and the next year he died of a pestilential Fever. Wherefore Hippocrates his Rule, *Aphor. 12. 6.* must be observed, that one Hæmorrhoid should be kept open: Unless, according to Aetius, the Patient had rather prevent all mischief by a frugal Diet, Exercise, Bleeding and Purging.

XIII. It seems an old Flux should be stopt. 1. The Flux is *to genere* preternatural. 2. Nature is weakened by spending of the spirits. 3. The Body is cooled and deprived of its aliment thereby. It seems it should not be stopt: 1. Upon the Authority of Hippocrates, *6. Aphor. 12.* 2. For fear of the recourse of the Blood to the Liver and to the noble parts. 3. Divers mischiefs follow the stopping it, especially a Quartane-ague, and a Jaundice from the Spleen,

Schettus
Ann. Chir.
Tab. 46.

Spleen, as *Joubertus*, lib. de Quart. cap. 9. says. For the decision of this case, we must observe, that this Flux, as it is made by the expulsive faculty, forced by the superfluous and noxious Blood, in an absolute propriety of speaking, is preternatural; wherefore in that thing it differs from the menstruous Flux, because this is commonly agreeable with sound Constitutions, inasmuch as provident Nature hath granted a redundancy of good Blood, and will have the same discharged by the Womb, that in its proper time it may serve to nourish the Child: Therefore the Flux of the Hæmorrhoids does not happen to, nor should be procured in well and healthy Constitutions, as *Solanander*, sect. 3. cap. 20. says. But to whom it is peculiar, and by custome natural, in them it must be governed by singular medical prudence, that it may neither be suppressed longer than is good for the Body, nor void the humour in greater abundance, than is consistent with the Rules of Health. Therefore *Jacchinus*, in 9. Rhaf. c. 72. says well; Sometimes it must be let alone, if it return at periods, and be not excessive; Sometimes it must be stopt, if it hurt the strength, so that Concoction is vitiated, and a Dropie may thence follow. Yea, we must observe here, what *Salvus Sclanus* has, *Comm. in Art. Med. Gal. l. 3.* That in many Diseases and Fevers evacuation is made by the hæmorrhoid Veins, by applying Leeches, which must be set not onely to such as use to be opened, but to whom this evacuation is not usual, if we conjecture that adust Blood does abound: for this evacuation eases the Body of that unprofitable burthen, and also drives away all those Diseases, to which Melancholy affords matter, which *Hippocrates*, lib. Πεδ. γυγ. reckons up. To the Arguments we must say, that the affirmative do conclude, as to a Flux of laudable Blood, in Natures not used to it, coming without any periods: That the negative do intend those Hæmorrhoids, that evacuate peccant Blood in Natures used to them, and at certain times, in such as are endued with a sort of neutral constitution of Body.

XIV. The Flux of the Hæmorrhoids is sometimes so pertinacious, that it is impossible to stop it by revulsion, or by astringent Medicines. I experienced such a pertinacy in a Noble-man at Venice 26 years old, of a sanguine Complexion, in Spring-time, who was first ill (for he had never had them before) of the external Hæmorrhoids running too much. When I was called to him, when neither Blood-letting, nor dry Cupping-glasses set to his Back, nor Ligatures, nor astringent Medicines, internal and external, did any good, and the Patient was then in danger of his Life, I propounded according to *Hippocrates* and *Ætius*, contrary to *Aquapendent*, the Burning of the Veins that bled; I confirmed my opinion by *Aph. 6. sect. 1. and Aph. 6. sect. 8.* And when the Patient found that Death was not far off, he admitted of Chirurgery: Wherefore, making haste home, I furnished myself with pointed or oval Instruments, and when I came back, gave them to a Servant, to bring them to me red hot: With which, being very hot, I touched severally all the little mouths of the hæmorrhoidal Veins, which poured out the Blood, and brought a crust on them, beginning with the highest first, lest the Blood, falling from them untouched, should quench the hot Irons before the operation was finished. Thus the Noble-man recovered his former health. If Nature had formerly often opened the Hæmorrhoids, and had been accustomed to transmit the superfluous Blood to this part onely, I had left one untouched, to be stopt by Plasters and Astringents, so that it might either be opened of it self, or very easily by Art, and a passage might be made, whereby the Blood (which is gathered daily in the Body, and uses to be evacuated at set times) might be evacuated, to prevent those Diseases, which *Hippocrates* mentions, 6. Aph. 12. and 6. Epid. sect. 3. text. 33, & 34.

XV. In the Cure, which is performed by Medicines, care must be taken of the Liver and Spleen, because the mesaraick Vessels are inserted into these parts, especially if they be hot or weak. Also obstructions of the Bowels and mesaraick Veins must be opened, if they give the original to this Disease. And I have sometimes cured this contumacious Flux perfectly with Steel-pills. At the same time, above all things, the fault of the Blood must be amended with the greatest Care, which seems to be the primary cause of this Flux. Which, if it be sharp and bilious, must be corrected by an Infusion of Rheubarb often repeated, especially with Tamarinds, which, according to *Mercurialis*, have an admirable faculty to check, both in Decoctions and given in substance; instead whereof our tart Prunes may be given, frequently eaten before Meals. If the Blood be hot and thin, it must be cooled and thickened; if watry, it must be dried; if much, there must be a thin Diet. For it is vain to think of stopping the Flux, before the original of it be removed.

XVI. The Pain of the Hæmorrhoids proceeds from bad humours transmitted to the sedal Veins, and not onely from melancholick ones, as *Galen* seems to believe, lib. de atra bile, 4. but sometimes from bilious and pituitous ones, according to *Avicenna*.

XVII. For Hæmorrhoids to be prickt that are distended with the afflux of much Blood, is no new thing. *Massaria* is of opinion, that they should rather be opened with a Knife than have Leeches applied to them. Where the Pen-knife seems too cruel, especially in Children, Women, and, in a word, the effeminate, let alone the Knife, and take the hamulous *Pericarpium* of the Teazle: fix a piece of a Leaden Bullet to it, that you may drive it the more certainly in, so you may strike the part, and take away as much of the humour as is requisite. Many testify that this small thing may be done with safety.

XVIII. The hæmorrhoid Veins are sometimes prominent outwardly, but often are latent within: Some bleed, others not: Pain sometimes precedes excretion of Blood; they often bleed without Pain, and they are painful also when no bleeding follows. The Pain may be so violent, that the Bladder being ill by Sympathy, a stoppage of Urine follows. A Man was troubled with the blind and internal Piles: The Physician had used Clysters, wherein he had put Salt and *Hiera picra*, hereupon the Pain and Inflammation were so intense, that the stoppage of Urine grew to be as troublesome as the Pain of the Hæmorrhoids, and he was at a stand, for which he should use Remedies first. But he did the Patient good by injecting an ounce of Oil of Violets immediately into the Anus, the Pain of the Hæmorrhoids first, and then of the Bladder being eased. And the same being afterwards injected several times, all Pain quickly ceased.

XIX. Violent and sharp Clysters are proposed for provoking the Hæmorrhoids; I do not approve of them; because they contribute not so much to provoke the Hæmorrhoids, as they hurt the Intestines and the mesaraick Veins.

XX. *Gasper Schioppius* having been troubled with tedious Pains and running of the Hæmorrhoids, and having made use of the most famous Physicians in all Italy, to no purpose, when, by the Advice of a Dominican Friar, he had washed the part with his own Urine, and received the Fume of Sulphur by a Tunnel, he perfectly recovered.

XXI. The Vein which runs between the least Toe and the Annular, is a Branch of the *Vena saphæna*. I have experienced the benefit of opening that Vein for quieting the Pains of the Piles, under which N. had spent many tedious days and restless nights.

XXII. I had a Matron under my Cure, who had been grieved a long time with most violent Pains of the

Riverius.

Forti, conf. 97. cent. 2.

Severinus, Med. Eff. p. 67.

Dodonæus, cap. 50. obs. Med.

Crato.

Velschius.

Severinus, Med. Eff. p. 65.

Horstius, Dec. 6. probl. qu. 8.

Scalpetus, Arm. Chir. Tab. 44.

Claudius,
Conf. 95.

Fortis.

Idem.

Solenander.

Rhodius,
cent. 2.
c. 94.

the blind Piles. I made her an Issue below her Knee in the inside of the Leg, then her Pains were quiet, and very seldom troubled her, unless after a disorderly Diet.

XXIII. Pains must be asswaged; and in my judgment we should abstain from violent Purgers, lest the humours be farther exagitated and heated, and so be drawn to the part affected.

XXIV. Among Anodynes, first let a Fomentation of a Decoction of Lettuce, Mallows, Violets, Henbane and Poppy be applied to the seat, and then an Ointment or Injection: Which yet must be varied; Because what does one good, will not doe so to all; nay, what has done the same person good in the like case, is not always good for him.

XXV. The violence of the Pain sometimes forces us of necessity to apply Stupefiers: So we sometimes mix *Opium* with Liniments; yet this must be done dextrously, lest the *Podex*, too much cooled with Narcoticks, doe not its office. *Avicenna* applies *Philonium Tharsense*, which he describes. I have often stopt the Pain by applying new Treacle or Mithridate, and by drying and discussing the inflamed matter have removed the Swelling.

XXVI. The burning Medicines proposed by *Celsus* and *Paulus* are not safe. This is the gentlest way of Cure; Having given a Lenitive first, foment the Hæmorrhoids alternately with two Sponges, wrung out of a pound of Cow's-milk chalybeate, in which half 'an handfull' of Henbane-leaves has boiled to the consumption of the fourth part, adding an ounce of Juice of Quinces: but if the Pain continued, I found its virtue a little remiss; therefore instead of it I used this Fomentation; Take of root of Marsh-mallow 1 ounce, leaves of Mullein half an handfull, let them be boiled in Chalybeate-water strained and Red-wine, each 8 ounces, to a consumption of a third, adding to the Colature of Juice of *Hypocistis* 2 drachms, and *Opium* 5 grains. A red hot Plate being then held at a convenient distance, the Hæmorrhoids are contracted, and as it were corrugated. Which being put up into their places, that they may not fall down again, they are dextrously kept up with an Iron-ring: for the benefit whereof many are beholding to that excellent ingenious person *Paulus Servita*. A piece of Cloth is fastned to the Ring on each side, which is fastned by a Linen-girdle with four Fillets sewed to it, and their heads to the Cloth about the Ring towards the *Perineum* and the Buttocks.

XXVII. Oftentimes pain and heat are joined with the Piles: Then they should rather be treated with internal and external Medicines, than be exasperated with any Chirurgery whatever. Among external things Ointment of Toad-flax is excellent, and fresh root of Fig-wort hung about the Neck. If they swell without sense of pain and inflammation, I first of all take a broad Iron, well heated, I so hold it to the Piles, that the fire may not touch them, but that they may feel the heat, as much as the Patient can well endure. In timorous persons I open them with Leeches, and having extraded the Blood sufficiently, to strengthen the part, I apply a new Sponge, wet in black, austere Wine, and wrung out. *Hippocrates*, for the foresaid Chirurgery requires an Iron with a round or an oval head. In my judgment a broad is better in this case, because with it the operation is sooner finished. But when they do not onely swell, but one or two of them that are swelled do also run, *Hippocrates* his oval Iron is better than a broad one: for the oval easily misses the bleeding Hæmorrhoids, which doe good: but the broad one does sometimes indifferently dry up as well the running ones, as those that are simply tumid, to the Patient's great detriment; which I thought good to take notice of out of *Spigelius* his Animadversions. Sometimes the Hæmorrhoids swell inwardly, yet because of their deep situation within the *Intestinum rectum*, the

swelling can be brought by none of the foresaid ways into sight, much less can they be cured with the repeated touch of a red hot Iron, whether broad or oval: What then must be done when Medicines are used in vain? Must not some other Remedy be fetched out of the Storehouse of Chirurgery? Yes surely, for a solid Pipe is required, which, actually cold, and onely smeared over with the white of an Egg, must be thrust gently into the *Anus* and heated by a red hot Iron rod often put into it, that by heating the Hæmorrhoids, so deeply placed within, it may by little and little dry them up.

XXVIII. Because Pain usually puts men to abundance of trouble, therefore especially care must be had of it, and we must look whether the part be pained with Inflammation, or onely with heat and smarting; for if the first, we need onely cool and lax the part; because such things as cool with astriction or revulsion, doe Men hurt, unless the pain be with Fluxion. If acrimony, heat and pain be very troublesome, order the Patient to go into a Semicupe; then to the Ulcers, if there be any, apply this Medicine; Take of Oil of Roses, 4 ounces, Crust 1 ounce, Litharge half an ounce, new Wax 6 drachms, *Opium* 4 grains. Make an Unguent. But if all these things will not doe, we must use Narcoticks, if so be after easing the pain, we will wash the part with warm Wine or Water. ¶ For the Cure of this Disease I prescribe half an ounce of Balsame of Sulphur, with which warm *N.* often anointed his Hæmorrhoids, especially after excretion, and he was eased of that most bitter and odious pain, and was perfectly cured. For this Balsame in this case does certainly good, and never failed, as innumerable Experiments do testifie.

XXIX. A Man sixty years old conficted with a troublesome pain of the Piles, with a Tumour, and Inflammation of the part, which did not cease with many Remedies. I prescribed a Fomentation of Rose-water, in 6 ounces whereof 1 drachm of *Sal Saturni* was dissolved, which Fomentation was often repeated every day. Afterwards a Cataplasma was applied of a white Onyon, roasted in Embers, and mixt with as much Butter: Within two days the Inflammation was asswaged, and the Tumour in a great measure dispersed. ¶ But whether they be flat or tense, and in pain without any great heat or acrimony, then it is not good to apply cooling things, for they hinder discussion, and farther fix the Blood settled there; but then it is not good to apply Laxatives and Discutients, which if besides these faculties, they also allay pain, they will doe the more good. Here a Semicupe will be proper in Water moderately hot, in which root and leaves of Marsh-mallow, Mallow, root of Fig-wort, &c. have been boiled. Then the pained place being wiped, must be anointed with *Oleum momordicæ*, which is most effectual, or with Oil of Peach-flowers, which in this case I have often used with great success.

XXX. One being at length cured of his tedious Hæmorrhoids (by means of a Pipe and a red hot Iron in it put into the *Anus*) relapsed as often as he took a Purge, which had Senna or Scammony in it. Wherefore I forbid him the use of any thing with Senna or Scammony in it, and he lived many years free from that Disease. ¶ In Spring and Fall I approve of gentle Purges, not meddling with those purging Medicines that are proposed by Authours, whilst building on a false foundation, they endeavour to purge Melancholy and black Blood, that it fall not on the sedal Veins, not observing, that they rather cause the Defluxion, which they would avoid, by the heat, agitation and violent motion of the purgative Medicines, and, which is worse, not of black but good Blood. Far therefore be strong Purges from us; and let *Cassa* onely suffice us, or it and a little Myrobalans, adding the second time some Lenitive.

Scul'tetus.

Mercatus.

Rolandus,
cur. 87.
cent. 1.

Riverius.

Solenander
conf. 20.
scd. 4.

Scul'tetus.

Fortis,
conf. 100.
cent. 2.

XXXI.

XXXI. Besides, pulp of Tamarinds is used to this purpose, which nevertheless, because it causes pain, which a desire of going to stool does follow, and does no good for Obstructions, is suspected: Nor do Potions of Syrups of Roses and Violets solutive, because they carry humours too violently to the part affected, want suspicion.

XXXII. Things that purge the humours are given, if through excess of Bile, or other filth in the blood of the mesaraick Veins, the Hæmorrhoids run excessively. For prevention before they come, in such as are subject to them, by purging frequently and conveniently, and hindring the encrease, and gathering of these humours; and that by Medicines proper to purge choler, yellow and black, which I think is bred of degenerate yellow, rather than of the dreggy part of the blood; which may be done with much more ease and success before they begin to run, because these excrementitious humours, lurking in the first ways, are with Purgatives quickly thrown off by Nature to the Guts.

XXXIII. If we must use aperients for Obstructions, yet we may not use Rheubarb, because it is apt to open the sedal Veins.

XXXIV. Galen, 6. de Caus. Symptom. denies that Evacuation by the Hæmorrhoids, next to a natural one, should be made use of, saying, "But if it be made seasonably, it is not altogether preternatural, and it is made seasonably, when that which is grievous is voided, and nevertheless, we must not use our selves to Evacuation by Hæmorrhoids, because either excess is dangerous, whether they run not at all, or too much."

XXXV. Then for derivation sake, and that the intemperature of the Liver might be corrected, especially because a Dropsie was beginning, I came to a Decoction of Spanish *Zarza-parilla*, of which the took fifteen Decoctions; Take of *Zarza* 2 ounces, infuse them 24 hours in 12 pounds of Spring-water, let them boil half away: Towards the end put in of Plantain Leaves 1 handfull. The Dose 7 ounces. This corrects the intemperature of the Liver, is diuretick, and proper for the *Menses*. And this was what was desired in our case, to wit, that the Hæmorrhoids might be stopt, and the *Menses* provoked. And I know not what reason *Massaria* had to suspect this way of cure by derivation to be pernicious, When it is rather extremely necessary in this case: and if perhaps some heat, little whereof I can see, might be feared in the *Zarza*, Plantain was therefore added. And this Decoction did corroborate, derive and drie up the excessive moisture of the blood.

XXXVI. Clysters are bad for such as are subject to the Hæmorrhoids; yea, the frequent and excessive use of Clysters may cause them; and sometimes breed an Ulcer in the Guts upon the regurgitation of the blood in these Vessels.

XXXVII. Ointments are not very proper for the Hæmorrhoids, because they dilate these little Bladders of the Veins, exasperate the filth gathered there, or the more florid, hot blood, hinder transpiration, &c. Wherefore though Unguents be so highly cried up among Practitioners, and especially *Unguentum de Linaria* in that case, yet I know not by what observation they were convinced when they wrote it: for I have several times observed, that it does little good to the blind, painfull Hæmorrhoids, nay, it rather encreases the pain and heat.

Medicines especially made use of by eminent Physicians.

For Pain of the Piles.

1. When the Piles are painfull and chapt, nothing is better than Beetles boiled in Lin-seed Oil

till they go to pieces in the Oil. The pain immediately ceases upon application.

2. Take of Sows 4 ounces, roots of Leek two ounces and an half, Oil Olive 6 drachms, pound them together. Then boil them in Oil, strain them and apply them.

3. *Lapis Calaminaris* ground with Rose-water, and mixt with Butter, assuages Pain much. ¶ Root of white Lily boiled, with Butter and Hen's grease, adding a little powder of Lin-seed, eases pain much.

4. The Herb All-good bruised and boiled in Cream, and then strained out, makes an excellent Ointment for the Piles.

5. Oil of Box is very effectual to ease pain, if one drop in Cotton be applied to the Hæmorrhoids. ¶ Balsam of Sulphur is excellent to ease pain, and disperse the swelling. ¶ A Decoction of Yarrow in their ordinary drink for three days does admirably disperse the pain of the Hæmorrhoids.

6. Leaves and Flowers of Toad-flax excell in a singular Prerogative to stop pain.

7. Ointment of Figwort is good. ¶ The drop-ping of a roasted Eel is good.

For excessive running of the Hæmorrhoids.

1. Galen's is the most excellent and onely Remedy, of Aloes, Frankincense, and the white of an Egg, made as thick as Honey, mixt with Hare's Down and applied.

2. This Medicine never failed me, which is made of Steel, old Sugar of Roses, and Powder of Claudine Sea-Wormwood.

3. Let the Hæmorrhoids be washed with the Patient's Urine, for it dries wonderfully and eases pain. ¶ This has been tried in several: Take of Powder of Bayberries, dried in the shade, one drachm, drink it in white Wine every third day in the morning for three times.

4. I have known the running of the Hæmorrhoids successfully stopt onely with Houseleek-water.

For the Suppression of the Piles.

Among things that open the Hæmorrhoids I must give the preheminnence to the greater Centaury root, if the bloody juice be squeezed out of it, and a Syrup made with Sugar. The Dose 2 or 3 spoonfulls in a morning. ¶ To open the Hæmorrhoids let an Onyon be hollowed, and some Oil of bitter Almonds be put into it, roast it in the Embers. Anoint the Hæmorrhoids with the juice when squeezed out.

For the Swelling of the Piles.

Powder of Mullein, given in Milk, or in some other Liqueur, is very good to waste the swelled Piles; also its Juice or Syrup may be given.

Hepatis Affectus in genere, or, Diseases of the Liver.

The Contents.

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O O

Atonia

Atonia Hepatis, or, Want of Tone in the Liver.

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I. THESE ought to be the Prerogatives and Conditions of things which cleanse the passages, as well in a hot as cold intemperature. 1. Because of the narrowness of the ways, they must penetrate, as *Cyperus*, Schoinanth, Saffron, *Iris*. 2. They must open, as Horehound, Aromatick Wormwood, Pistachio's, root of Parsley. 3. They must concoct and mollifie, as Raisins, Figs, sweet Pomegranate Wine, Rhenish, small Wine. 4. They

must be absterfive as Honey, Sugar. 5. They must strengthen, as Agrimony, Wormwood, Schoinanth, Rue, Spike. 6. They must preserve from Putrefaction, as *Cassa lignea*, *Calamus Aromaticus*, Cinnamon, Myrrh, Amber, *Lignum Aloes*, *Rhodium*, and all sorts of Spices. 7. They must dry moderately, as shavings of Hartshorn, Ivory. 8. They must be specifick, as Rheubarb, Wolf's Liver, Raisins, Flesh of Snails. 9. They must also be astringent, correct Malignity, and not easily corrupt.

Mat. Martini de morb. ment.

II. The proper way to take things inwardly is the Mouth: The virtue is carried with the chyle to the Heart, and after to the Liver. The Moderns have an Invention, to infuse some hepatick Liquour into some Vein opened in the Arm: It is held, that by this way, the Vein being closed and tied, the Medicine communicates its singular strengthening faculty to the Parenchyma of the Liver, being carried to the Heart, and out of the right Ventricle by the great Artery into the Hepatick Artery, and so to the Liver.

Roslinus.

III. Rheubarb is indeed the life of the Liver, but to a hot Liver it is Death: because it is hot and dry to the third degree.

Riolanus.

IV. Let no man wonder how it comes to pass, that many do not only find no relief, but sometimes hurt from Oils Chymically prepared, as also from Decoctions. But let him take these true Reasons from Hofmanni, *prefat. in Lib. de Medic. Offic.* Distilled Oils, which they commonly call Essences, are so plainly Enemies to the membranous Stomach indeed, by consuming its radical moisture, and to the Liver, and other Bloud *Viscera*, by heating, or to speak more plainly, by raising an Inflammation, that some have contracted to themselves a perpetual thirst, others a bilious Cachexy, and some a hot Dropsie.

S. Pauli, *Quadr. Bo-*
tan. p. 225.

V. The Lobe of the Liver, that lies upon the Stomach, is heated by hot Ointments before the Stomach it self, which I admire indeed, how it has always passed unobserved by famous Men in their practice.

Fortis.

VI. *Altimarus* denies, that Almonds and Pistachio's are good for cold Epaticks. 1. Because things that are easily corrupted, cannot be proper for them. 2. Because they are oily, but a cold constitution of Liver is very much hurt by these things, because Obstructions, which are usually joined with them, are encreased by such a quality. 3. Because they are readily converted into Bile. On the contrary the affirmative must rather be defended with *Savonarola*, who prescribes Almonds among other convenient Medicines. 1. Because Almonds, especially bitter, have a faculty to extenuate and purge the thick and viscid humours of the Liver, *Gal. 2. de Alim. fac. c. 22. and 30.* Where the same is affirmed of Pistachio's. 2. According to *Dioscorides l. 1. c. 136. de Mat. Med.* they and Pistachio's do provoke Urine, but things that provoke Urine are good for cold Epaticks, whereby both the Liver is strengthened, and obstructions are opened. *Salus in ann. c. 82.* answers *Altimarus* his reason. To the first it is denied; for Almonds and Pistachio's are hard of Concoction: But things that are hard of Concoction, are so of corruption, in as much as all Concoction of Aliment is made by means of Corruption, considering the *Terminus a quo*. To the second, Obstruction need not be much feared from an oleaginous moisture, because whatever is oleaginous is in some measure hot. To the third, Nor doe they any harm, in that they are quickly turned into Bile, because nothing need be feared from a cooled Liver: For it requires heating and absterfive Food and Physick, which Almonds yield.

Horslius, *Dec. 7. Probl. 1.*

VII. In a certain Maid there was first a hot Intemperature, upon which account she was said to be Hepatick. There was extenuation, which seemed to tend to a Consumption, there was also driness of the Solid Parts, which hindered the encrease

crease of the Body: Which though it could not be remedied, yet it was needfull to hinder the Encrease of it. Therefore in a complicated Disease we should have respect to the Cause. Her Intemperature was hot and dry, by reason whereof, because much bilious matter was gathered, I begin to purge her with no hot Medicine, that is, with the Waters they call *Villica*, given her seven times according to Art. Alteration followed Purging, which I was minded to make by Juices of Cichory and Sow-Thistle. Cichory is most gratefull to the part, both in refrigeration and absterion of the Veins of the Liver, and also in asfriction, which it requires. *Sonchus* has the same virtue, but it is more cooling. I gave the Juice with Sugar for ten days, and all signs of heat seemed to abate. Her Diet was cooling, she used Sorrel, Lettuce, Purslain, Endive, Prunes, Cherries, Water-Melons. She avoided all salt, sweet and fat things. Outwardly Cataplasms of the same virtue, of Barley-flower, and the foresaid juices were applied: She was anointed with *Ceratum Santalinum*, &c. Then, to cure her extenuation, I proceeded to give her Milk. These things did her so much good, that she filled well with Flesh, and her colour changed for the better, more than one could have believed.

Jacchious,
esp. 30. ad
9 lib. Rhais.

VIII. Three ways the Liver, full of hot humours, uses to swell up the *Hypochondrium* in acute Diseases. 1. When the humours, having got out of their proper receptacles, are diffused through the *Parenchyma* of the part, and make a swelling both hard and painfull, which is properly called an Inflammation. 2. When the same humours, filling onely the greater Vessels of the Liver, make some distension, which swells the *Hypochondrium*. 3. When all the Veins running up and down the Liver are so full, that they cause a manifest Tumour. And as in these Cases divers parts are affected, so also the condition of the Tumour and consequent Symptoms are various, and therefore the Method of Cure must be various. For in the first the humours make a hard and painfull swelling, usually of an orbicular figure. But when the same humours onely fill the greater Vessels, it is done several ways, because sometimes they stop there, grow hot and putrescent, and cause acute and malignant Fevers, although they make no swelling in the *Hypochondrium*, apparent either to the Eye or touch: Sometimes the humours offend onely in abundance and motion, when, as they are passing from below to the upper parts, they run violently into the Liver, whereby it is suspended as by ligaments, and they fill the greatest and nearest Veins excessively, whereby they being made shorter, draw the Liver upwards, and so swell the *Hypochondrium*: Which sort of swelling *Hippocrates* calls a *revulse Hypochondrium*, and it is a sign of the tendency of the humours to the Head. This swelling is distinguished from others, because it appears most in the upper part towards the Ribs, and underneath a vacuity may be felt in the place where the end of the Liver is naturally situated: yet no hardness, nor pain is felt in the swelling, because the affection is not in the Liver, which hurts it, or swells it up; yet a kind of tension may be perceived in the tumid part; and then this affection lasts but a while, because the humours are but passing that way upwards. If the vessels dispersed through the whole *Viscus* be filled with hot humours, the third sort of swelling in the *Hypochondrium* is caused, which is also twofold: For the Juices do either simply grow hot, and do not contract putrefaction, or they putrescent in the Veins. If the first way, it is done also in a twofold manner; for either they remain quiet, distending the foresaid Vessels onely with abundance, whence comes a swelling which *Hippocrates* calls *φλεβονόστα τεβρον*, in manner of distended Veins, where a tumour indeed appears both to the Eye and touch; but if it be pressed, it resists not the Touch, nor onely because of its softness,

but also because the matter that makes the tumour being pressed with the hand, gives way, and recedes to the next place, like blood filling a Vein, when it is pressed with the finger: which indeed shews, that the fault is onely in the repletion of the Veins, not in the substance it self, because the swelling dissipates quickly, and of it self: But if these humours filling the said Vessels, be in agitation, because of admixtion of a flatuous Spirit, the same swelling rises soft, but with a pulse or Palpitation, concerning which *Coac. Sect. v. 55. A Pulse in the Hypochondrium with Tumult, is disturban of the Mind*. If finally the same humours filling all the Vessels of the Liver do putrescent farther, a swelling arises, which causes a soft distension, not very painfull, usually of a long figure, in distinction from an exquisite Inflammation of the Liver, which makes a hard and painfull swelling, circumscribed with an orbicular figure: This swelling comes when putrefaction has seized all the Veins of the Liver, and especially if the Veins themselves be inflamed: And the Inflammation is of such a Nature, that it will permit no good blood to be bred; which since it is the matter for breeding of vital spirits, of which the animal are made, hence a *Delirium* and *Phrensie* arise: The swelling is soft, because the substance of the *viscus*, which first occurs to the touch, continues as yet in its natural disposition and softness: But hardness or tension is felt inwardly, when the greater Veins are full and inflamed.

Prosp. Mar-
tianus, com-
in v. 318.
lib. 4. Epide

IX. If Blood be let plentifully, the Inflammation ceases in one day, so that the Physician may be truly said to have killed the Fever. And if the *Hæmorrhoids* be stoppt, let them be opened: If the *Menses*, and the time be near, bleed in the foot, and afterwards, if the Disease continue, in the arme. ¶ A vein must be breathed immediately, and store of blood must be taken away, not all at one time, but at several times: Nor must we desist from this operation, before the present pain of the *Hypochondrium* cease, or in a great measure be abated: Otherwise what remains, degenerates either into an abscess, or an incurable *Schirrhus*. Almost all dye, who either bleed sparingly, or not till after the fifth day. For a third time bleeding, though it be plentiful, does not cure, if it be used after the humour is fast impacted into the Liver, or tends to suppuration. Therefore if blood enough be taken the first or second day, the Inflammation is prevented thereby, if so be other Remedies be not neglected.

Saxonia.

Enchir. Med.
Prag.

X. If there be no place for Blood-letting, Cupping-glasses must be applied; yet not, as some would have them, to the Shoulders and Back: for that were to draw the Inflammation of the Liver to the Lungs and Heart: Let them therefore be set to the Buttocks and Loins. ¶ In this Disease the Ancients set Cupping glasses with Scarification to the right *Hypochondrium*; from which I think we should abstain, because they draw nothing from the part; but on the contrary draw the Humours into it out of the Veins, and so encrease the Inflammation.

Saxonia.

Enchir. Med.
Prag.

XI. In purging we must observe what part of the Liver is inflamed. If the gibbous part be inflamed, no Purge may be given, according to *Avicenna*, but Evacuators by Urine: If the simous part, we must use things that evacuate by stool; otherwise Nature will grow weak, and the Inflammation will encrease. Wherefore if the Gibbous part be inflamed, we must give Lenitives, not Purgatives; unless perhaps Nature should attempt a little evacuation by stool; wherefore when signs of Coction appear, Nature may be helped, not before: for according to 13. *Meth.* they that Purge in the beginning, make the Inflammation pertinacious. If the simous part be enflamed, *Galen*, c. 14, 15, and 16. l. 13. *Meth.* approves of *Carthamus*, Nettle, and root of Polypody: We may mix some *Epithymum*; and upon urgent necessity *Galen* says he gave black Hellebore, with Bar-

ly Ptsan strained. We may give Rheubarb, if Bile abound; Agarick, if the Inflammation be pituitous; if melancholick, *Senna*, *Epithymum*, *Polypodium*, black Hellebore. Wherefore in our Practice we must observe, that we may ascend to violent ones, not in a bilious Inflammation, but especially in a melancholick one; because this may degenerate into a

Capivaccus

Schirrhus, an incurable Disease.

XII. *Galen* approves of Purgatives mixt with meat in the foresaid places. "In process of time, says he, when the Inflammation is concocted, we may evacuate by the Belly, if the hollow part be affected, with Bastard-Saffron mixt with Meat, and with such things as gently loosen the Belly: And in the remission we may use these things more and more boldly than before; and then things that are stronger than these, partly boiled in Ptsan, partly reduced to fine powder, and these may be given even in water: For I have sometimes boiled a little Polypody, and rind of Black Hellebore in Ptsan. *Massarius*, l. 3. *Pract. c.* 13. subscribes to the same when he says: "*Galen's* way of giving purging Medicines is very worthy our notice: He used to mix them with Meat, and that in a twofold manner; one way by boiling Food and Physick together: Another way was, by pounding the Medicines, and mixing their very fine powder with Ptsan, or other Medicines. Both which ways, as they are good in other Diseases, so especially in an Inflammation of the Liver: For when the Meat passes out of the Stomach, not only it, but the Physick with it, is drawn to the Liver, whence very likely Purgings will succeed more easily, and with far less trouble. And perhaps that was the Authour's meaning, *Lib. de viâ. acut.* 4. text. 18. when he says, That at-
tractory Sorbitions must be given. Wherefore in my Judgment it were the best way to revive this way of purging, at this time disused." Some disapprove of this, because if Purgatives be mixt with meat, it corrupts, and therefore the parts are deprived of their due nourishment. 2. Because hot things are prescribed, very adverse to an inflamed Liver. But 1. This reason might conclude something, if Medicines were always and daily given with food: But it can doe no great harm, if once or twice eating do not nourish, because fasting it self is a sort of evacuation. 2. Though Medicines prescribed by *Galen*, be never so hot; yet they are tempered by mixing them with Ptsan, and such things.

XIII. Alteratives may be given, Whey of Asses Milk, either clarified or distilled: Decoctions of Cichory, Endive, Sow-Thistle, Sorrel, Liverwort; Clarified Juices of Endive, Sow-Thistle, in the foresaid decoction. But I chuse rather to give 1 pound and an half, or 2 pounds of water distilled off Juice of Endive, Cichory, or Sorrel: Or, Syrup of Juice of Lemons with some diuretick Vehicle. For Decoctions and Juices lie long on the Stomach, because they stand in need of some concoction, and so coolers come to the Liver, with their virtues much broken. And clarified Whey does not pass so easily, and distilled, it acquires a fiery quality in distillation, which is not communicated to, nor kept by Waters, which are very cooling. But *Galen's* caution 1. *acut.* 43. must be observed, That nothing be given actually cold; for cold things condense the part, and render the humours crude.

Fortis Conf.
57, cent. 3.

XIV. If internal Repellents be given as they ought, we must have regard to the form, place, time, greatness of the Inflammation, and to the use of the Part: To the form; for if the Inflammation be Erysipelaceous or legitimate, we may at the very first use Coolers: For although they may cause some Obstruction in the Liver, nevertheless the danger is greater, which we prevent by drinking cold water, than the damage that follows; for if these cooling things were not given, a Consumption or abscess would follow. The place is either the fi-

mous part, then Coolers must by no means be astringent, for if they bind the part affected, the matter will grow hard, and the bile-passage will be stoppt, and so the Bile retained in the Liver will increase the Inflammation: Or, the gibbous, then Astringents are not condemned, for they have a faculty to hinder the fluxion from the gibbous part to the firmous, and so it will be preserved from Inflammation. Upon the score of the use of the part, which is common to the whole, things must be mixt to preserve strength. If the Inflammation be pituitous or melancholick, we must abstain from astringent and very cooling things.

Saxonia

XV. Wind gathered in the Cavities of the Body, that is, in the Stomach and Guts, and pent up, if it cannot find a passage, it makes its way by force through the blind, connivent ducts, and is diffused into the ambient Membranes of the Liver, and the capillary Veins disseminated through the hollow and gibbous part of the Liver, and holds them in the manner of a *Schirrhus*, yet without a *Schirrhus* it so much distends them, that a great swelling oftentimes arises about the Region of the Liver, and shews it self by the same signs that a *Schirrhus* has, but that it is less renitent, and bred in a shorter time: For oftentimes it appears so big, that it fills the whole *Hypochondrium*, so that you can neither feel the ends of the ribs, nor get your fingers under them, nor can you feel any figure or circumscription of the Liver. It is known that this Disease comes from abundance of vaporous and gross wind; because the Patients perceive not only a sense of gravity, but of distension. Not much unlike as the Spleen is sometime distended by a flatuous Spirit, as *Trallianus* testifies, they call it *εμπνομή*, and *εμπνομή*, Windiness and Inflation. And when vulgar Physicians know not, that the swellings of both these viscera come from wind, how blindly do they go about the Cure, when they know not the cause of this Disease? Then thousands of Juleps are prescribed, the cure is protracted a long time, and at last, when they have done more harm than good, they with great constancy affirm, that it is an incurable *Schirrhus* of the Liver or the Spleen. But this Ignorance does shamefully disgrace its authors; for when this cloudy vapour impacted in the part, is in process of time dissolved by the innate heat, with fomentations, fasting, an extenuating and heating Diet, administered by old Women and Empericks, the swelling of the *Hypochondrium* vanishes, all pain is pacified, and these pains with their false opinion are rejected. I exhort therefore all ingenious lovers of truth, and such as have regard to their Good-Name and Credit, diligently to learn the difference between the Symptoms of Wind, and others. Indeed it is very difficult, but very commendable, and a thing that gains the Learned much credit. For many Patients, as if they were breathing their last, through excessive pain and trouble, do miserably cry out for no other cause, than that they come from a windy Spirit: Which if it be corrupt, if it arise from a putrid and poisonous matter, and run up and down the Limbs with intolerable pain, then it requires a man well skilled in the works of Art, who can know both the molesting Wind, and the matter whence it arises, and can distinguish this from other Diseases. Moreover, the distension of the *Hypochondrium* from wind alone is of no long continuance without the efflux of Phlegm; for continual Pain draws it, the extension of the passages admits it, and the coldness of it, yea, and of both of them, weakens the Liver, whereupon crude humours are bred. Wherefore I would advise the Physician to take care of both, but of that especially, which is most urgent. Yet we must have a care how we use hot things, especially in such as are plethorick, or have got a hot Liver, either by nature or a hot course of Diet. A large Cupping-glass applied twice or thrice, with much flame, is good; yet not

not before the phlegm be perfectly evacuated, otherwise there were danger, lest it should fix the phlegm there, and prove the cause of a true *Schirrhus*. Almost the same remedies are good for the flatulent obstruction of the Spleen, which are good for the Liver, but it requires stronger purges, if the humours be gross. But if there be no great store of flatulencies, and they be thin, without hot matter, and if the habit of the body be spare, then gentle things must be used both inwardly and outwardly, and oftentimes the applying of a Cupping-glass will be sufficient.

XVI. My Tincture made of Mars and Saccharum Saturni in Plantain-water is good against an Inflammation of the Liver: For Saturn is contrary to all Inflammations: But we must have a care, that we use it not too often. Externally the same may be used with Water of Plantain, Roses, Strawberry, or Nightshade. ¶ If you would know whether there be an Inflammation in it, or in any other part, apply hot Topicks. If the part can bear them, there is no inflammation: But if it cannot bear them, certainly know, there is an Inflammation, and that an Abscess will follow.

XVII. The Wife of N. being ill of a *Schirrhus* in her Liver, used so many emollient things, that at length an Inflammation, and then a great Abscess arose, after which an Ulcer, and Death followed. From whence it is clear, that Emollients must not be used to Scirrhus Tumours, as Galen 5. *simp. cap. 1.* advises. And not only Scirrhus Tumours of the Internal parts, but of the external also, are exasperated by them, and turn to Cancers.

XVIII. If the *Schirrhus* be contumacious, *Emplastrum de Cicuta Hildani* does the business. I used it with good success in a Lawyer of Marburg. Although it cause pain, yet it must be kept on, and renewed every third day.

XIX. The Liver, being a noble part, must be treated with great caution; for you must not think, that you need not care with what remedies you alter it, so as you may reduce it to its natural Symmetry; but you must see, when it rages with heat, that you do not apply to it chilly things, whereby the small veins of the Liver may be stoppt: for thence a great calamity of Putrefaction may arise, and a foundation may be laid for the greatest Fevers. Let them therefore be openers of obstructions, such as breathe a gentle heat: for this is a part of so great authority, that Life cannot subsist without it. ¶ I indeed avoid the excessive use of cold things to the Liver: Because it is a part, which, when it is hot, easily falls into the contrary fault. Yet to them that have a natural strength in that part, and their Liver burns with a hot intemperature, an *Oxyrrhodinum*, actually cold, may be applied, as it is used to the Forehead, and also a Cataplasma made of it and Barley-flower, or of bruised herbs, cold virtually as well as actually: And truly I have found this very seasonable in Burning Fevers, with an Inflammation of it.

XX. When the Liver is hot, we must consider whether the Intemperature be simple, or come of bile: If from bile, we must cool with gentle aperients, and bind a little, as with Conserve of Maiden-hair, with Cichoraceous things, Bugloss, and the greater cold Seeds.

XXI. Then for tempering the heat of the Liver and Blood, two great remedies must be used; the one internal, the other external; The Internal is Asses Milk and Sugar, methodically given for forty days and more; And the External is a Bath of sweet Water for the whole body, made of a decoction of leaves of Mallow, Violets, Willow, Water-lily, &c.

XXII. After the Meat is passed out of the Stomach, and concocted, it is good to drink, especially Beer well boiled and wrought; for so the Stomach, as *Avicenna* says, is washed; the Guts, whose

moisture is exhausted by the heat of the Liver, are moistened, and the Belly is loosed; the Chyle also penetrates aright into the Veins; for drink is no crato: thing but the Vehicle of the Chyle.

XXIII. *Avicenna* says, A Vein must be opened in an obstruction of the Liver, when it is old: Which must be rightly understood; for if we should always tarry till the Obstruction were old, certainly it would be so increased, that it would be dangerous. *Avicenna* therefore means some great fault in the blood, and if the Obstruction be from blood, and give not way to gentle Medicines, a Vein must be opened.

XXIV. Whether the Liver or Spleen labour of an Obstruction of crude, thin and unconcocted humours, or of a *Schirrhus*, the Physician may quickly remove the Disease, if he carry off the matter by strong Purges: But if out of timorousness, because of *Aph. 22. 1.* he delay it, the bad humours mix themselves with the Mass of blood, so that afterwards there arises a tedious Disease.

XXV. If there be no occasion not reason to let blood, we must take care to purge the blood from the pollution of the serous and watry humour, by giving things to purge the serous Tumour; For which purpose, I have learned, by long experience, that Juice of Seed of *Carthamus*, and an Infusion of Agarick and Rheubarb are good; which you must doe at short Intervals, namely, every third or fourth day: for you must in this manner purge the obstructions of the Liver, especially them that are in the gibbous or hollow part of the Liver: Because, to purge more plentifully, would either be to no purpose, or dangerous, seeing it is impossible for a great deal to pass the obstructed cavities; but in an obstruction, that is not in the passages, we may evacuate more liberally. When you have done this six times, you must betake your self to things that have a virtue to evacuate the humidity of the Liver, and to correct its fault; and so for six or eight days you must give every morning *Confectio de jecore Lupi* made into Lozenges; also Powder, or Lozenges of China and Dock-root, with twice as much Sugar; or *Diarrhodon* with powder of *Schoenanth*; Trochiscs of Rheubarb with a little *Dialacca* and Sugar. And so at intervals, you must purge what is watry, and strengthen the Liver, and you must endeavour to open it with the foresaid Medicines.

XXVI. Error is committed by many in the use of Rheubarb. If the obstruction come from bile, it is approved; if from phlegm or melancholy, by no means, especially when the phlegm is thin: But if thick phlegm or melancholy offend, it will doe harm, for it evacuates Bile, which is matter of Health in the Body, because by its heat, the coldness of the phlegm and melancholy abates, it attenuates also, and in some measure is deterfive. This is another error, Because this Disease is of long continuance, Physicians prescribe, that the Patient do frequently, that is, every, or every other day, chew Rheubarb, and swallow it: but they are mistaken; for bile is evacuated, which does not offend, and the obstruction is increased, because it is not administered in infusion, but in substance, which is thick and stops. They err also, who order it to be chewed with Raisins, to take off the unpleasantness: But by this means its substance is carried to the Liver, the place obstructed; for sweet things serve for a vehicle to others; whereby the vessels are more obstructed.

XXVII. It is a good way of cure, which evacuates by Urine; but we must not use all evacuators by Urine: for things that breed much aqueous humidity, do rather give an augmentation to the cause, and increase obstructions. Wherefore many doe amiss in using emulsions of the cold Seeds for obstructions remaining after acute diseases. Therefore, I think, such things should be used, which either

Ficinus, Phys.
sograph. cap.
9. & 19.

Petrus No-
fol. Harmon.
4. 2. p. 211.

Riverius.

Fab. Hilda-
nus, c. 4. de
Gangrene.

Hartman-
nus.

Heurnius.

Wallefius.

Heurnius.

Fortis, conf.
47. cent. 4.

Capivaccius

Walrus

Mercatus

Capivaccius

either have a property to move Urine, as Rheubarb, Seed of *Carthamus*, or are absterfive, as Turpentine, and Chalybeate Medicines. For things that are properly diuretick, as such as put the humours in fusion, seem a little suspicious: though sometimes they may be usefull, because they contribute much to the carrying of other Medicines.

Mercatus.

XXVIII. Things that dissolve Tartar, bred any where in the body, do open obstructions of the Liver, from what cause soever they proceed: For as the obstructions of the Macrocosm, so also of the Microcosm, are made by Tartar. But things may be added to them, which are commonly prescribed by Practitioners: for though they cannot doe the business, yet they are sure vehicles, to carry deobstruent Medicines, that is, things that dissolve Tartar, to the part affected, and render them more effectual. Therefore distilled Waters, Apozemes, Infusions, Syrups, &c. ought not to be neglected. Iron, and its various preparations are the principal Medicines in this case. Many preparations of it are invented; but, the simpler they are, the better. It is admirable, how effectual the crude filings of Mars are in such diseases, taken twice or thrice a day, from half a scruple to half a drachm.

Hartman-
nus.

XXIX. We must always take care, that some Astringents be mixt with things that open obstructions, and attenuate, that the substance of the *viscus* may be strengthened, and the aperients, being longer detained there, may act more effectually. For it has been found, that the Liver has been not a little hurt by the excessive and continual use of aperients.

Vallesius.

XXX. They deserve reprehension, who give but 1 ounce and an half of *Oxymel*: which small quantity scarce moistens the bottom of the Stomach, it is kept partly in the *Parishmia*, and after it is taken is spit out again, and partly in the Gullet; wherefore both the quantity and virtue of it are so diminished in the journey, before it comes at the Liver, that the *materia prima* of the *Oxymel* gets not thither. I give 4 ounces of *Oxymel*, and sometimes 6 every day, but at divers hours, that is, 1 ounce and an half early in the morning, and as much a little before dinner and supper: for if it should all be given in the morning, it would hurt the Stomach too much.

Sanctorius.

XXI. In opening obstructions of the Liver, we must proceed in this order, first the concave, then the gibbous part of it must be opened; and indeed in the concave preparation must be used, with clarified juice of Cichory, Liverwort, and Agrimony, to 3 ounces in a decoction of Cichory, Agrimony, Hops, *Asparagus*, and roots of Grails; having first given a *Bolus* of *Pil. de tribus* half a drachm, with *Cassia*, persisting several days, that both the passages may be opened, and the gross excrements carried off, not omitting a Purge of Agarick, Rheubarb, Senna, &c. The hollow part being opened, the gibbous part of the Liver must be cured with violent openers and purgers; for example; Take of extract of Rheubarb 1 scruple, *Tartarum vitriolatum* half a scruple. Mix them. Make a *Bolus*, upon which, let the Patient drink some distilled Water of Agrimony, in which, after a while, ten drops of redified Spirit of Tartar may be dropd.

Fortis.

XXXII. Purgatives must answer in proportion to the foresaid preparers and aperients, among which, since Rheubarb has the prerogative, we must not depart from it; yet observing this difference, that as the substance purges the hollow more than the gibbous part, so the Infusion purges the gibbous part more than the hollow of the Liver, because it communicates its subtiler parts to the Infusion. Let 2 drachms be infused in Agrimony-water, adding a little Spike, Senna, and Polypody of the Oak, and to the expression add some Syrup of Roses solutive.

Idem.

XXXIII. We must not desist from the use of aperients, till all pain be quite gone, or well abated, and the *Hypochondria* be lighter, since the obstruction of the Liver is a chronic Disease, and usually cannot be opened in one week, nay, scarce in a whole year. We must be very industrious to take it away; for there is the beginning and foundation of all Diseases; and unless it be carefully and totally taken away, it causes the corruption of the Blood, Inflammations, Fevers, *Schirrhi*, divers Fluxes of the Belly, Cachexy, Dropsie, Jaundice, &c. 2. A due order must be observed in giving of all Medicines, Universals must always be given before Particulars and Topicks. 3. Medicines must not be given till long after Meat. 4. They must be Liquid, that they may penetrate. 5. Attenuant, dissolving and discussing things; besides that, they must be moderate, and must also be hepatick and astringent. 6. In Diseases of the Liver we must not use sweet things as Meat, but as Sauce, after recovery: but they must not be offered to any, while they are indisposed. External Topicks must never be cold; but always hot, or warm.

Hofmannus.

XXXIV. One at Padua was ill of a deplorable Ulcer of the Liver, he was otherwise a lusty Man, and addicted to Sea-affairs. The Excellent H. S. a Physician of Venice, contrary to the advice of the rest of the Physicians, got his *Abdomen* opened with a Razor upon the Region of the Liver, that much of the Pus might run out at the wound; After which the wound was cured, and the Man survived, and three years after he leaped and wrought, and found no inconvenience.

Capivacci-
us.

XXXV. Some are of opinion, that an Imposthume of the Liver must not be opened, because, according to *Fernelius* 6. de part. Morb. cap. 4. and *Foressius*, lib. 19. obs. 10. an Ulcer contracted from an Abscess, which is continually washed with aliment, must perpetually be very foul; nor can it ever heal, seeing the substance of the Liver is spermatick, and can no more be repaired than other such parts. This Disease therefore, since it is of it self mortal, let the Physician abstain from external incision or burning, lest he be thought to have killed the Man, whom the violence of the Disease destroyed. But on the contrary, where it is not possible to evacuate the Pus by Urine, or any other way. *Mercatus Pract. lib. 4. cap. 2.* intimates, that the opening of it with a red hot Iron may be practised, by a skilfull and honest Chirurgion. "If, saith he, the abscess appear outwardly, certainly, it is bad not to cut it, because if incision be omitted, the Liver is eroded by the Pus, and there is no escaping of Death. But if you be minded to cut it (without a red-hot Iron) there will be danger of an hemorrhage, and the Man will immediately be destroyed. Notwithstanding, *Capivaccius*, l. 3. Pract. c. 23. and, *Saxonia*, l. 3. *Panthei*, c. 29. give instances of the opening of it with success. Some tumours come to suppuration, and because the Liver is of little sence; for onely the gibbous part of it has Nerves, therefore crude ones cannot be distinguished from suppurable ones, but in process of time: For then they that suppurate, especially on the gibbous part, stand out sharp, and indicate Section, without endangering of Life, as I have experienced in several: although the common integuments, the Muscles and *Peritoneum* were cut. But if it be in the hollow part, it must be purged by Urine, as I observed in a Nun. Which cannot be done in a Tumour of the gibbous part. When it is cut, a Tent may be put in, dipt in the White of an Egg. Then we must use digestives, as in the wound of that part; Afterwards a cicatrice must be made with Sarcoticks, and then with Epuloticks; yet all the purulent matter must first be evacuated by help of Tents, and leaden Pipes, by which it is purged sooner, and with more convenience. In this manner I have cured several, who, at this present, live

Marchetti,
obs. 52.

live well in health. ¶ *Hippocrates* 7. *Apb.* 46. teaches us how a purulent Liver may be healed. But almost all Men judge them desperate, who have a purulent Liver. The Cure, I believe, is not so difficult, but it may be attempted with some hopes of recovery; But Physicians fearing lest the Pus should be found bloody and fetid (in which case they certainly die) are afraid, lest the cause of death should be imputed to them. I visited one, whose Liver I immediately judged was inflamed and purulent: Others believed he was troubled with a malignant Fever. I thought to have cut him over against the Swelling, to let the Pus out, which remedy was derided: After he was dead, I ordered the place to be opened, which the wretched Man, while he lived, pointed to, as most tormented, and the Coat of the Liver was found parted from the *Parenchyma*, and in that space there were five pounds of white Pus, as I foretold. ¶ Although *Hippocrates* 7. *Apb.* 42. says, the case is desperate, when Pus comes out like to Lees of Oil; yet we must not wholly desist from good hope, seeing this seems to proceed rather from the natural condition of the suppurated Liver, than from the default of heat only, because, when the substance of the Liver is inflamed, the heat is not such, as to be able to turn the substance of it into white Pus. But, if you will venture on it, make the hole large outwardly, and narrow inwardly.

Sanctorius.

Mercatus.

and make a Rupture there. It happens above the Navel, but very seldom. Not only I, but others with me, have seen one below the Navel, and by the sides of it, and far above the Groin, which they dealt with as with an Abscess. And the Chirurgeon could produce no other reason for his error, but that it was not the usual place for Ruptures. Practice shews us many other Ruptures besides simple and compound ones, which are not found among Writers. For experience has taught me, that the *Peritoneum* may burst in the hind part toward the back, and there make a Rupture: we find also, that the process of the *Peritoneum* may be so burst in the Groin, that the Guts may not fall into the *Scrotum*, but thrust themselves between the Skin and the Muscles, towards the thigh. Besides, I have more than once observed a *vas deferens* corrugated has fallen into the *Scrotum*, and caused a Rupture there, which might easily be put up by help of the hand; yea, which upon lying on his back would go in of itself, from which no danger need be feared.

Barbette.

II. Medicines acting by a manifest quality, are such, as by their excellent astringent and drying quality do contract the process of the *Peritoneum*, and stop the going out of the Guts: But the use of them in grown persons is very much suspected; for by long using of them, the Liver, and other of the Inwards are hurt and obstructed, and then I see not how the virtue of them, because of their astringent faculty, can get to the place affected. Besides, the Belly is made very costive, but how dangerous costiveness is for a Rupture, is known to all Men. Yet I have often experienced these things following, which act by their specifick virtue, to be excellent, Comfrey-root, Rupture-wort, Earth-worms, spotted Lungwort, Stag's-pizzle, Seed of Thorow-wax.

Hildanus.

III. The noble J. J. a *Diespach* had been ill for 20 years of a great Rupture of his Guts; for curing of which; he had used several experienced Men, but in vain. At length, when he did not dream of being cured of it, he had a fit of sickness, which confined him above six months to his bed. After this he found not the least sign of his preceding Rupture, nor did he use Trusses any more. And that it was a perfect cure, this is a sign, for when two years afterwards he was troubled with stoppage of Urine and Costiveness, and used an emollient Bath and laxative Ointments, not the least sign of any Rupture appeared. ¶ Contrary to the expectation of many, I cured a Man who had had a Rupture in his guts 10 years, thus. I ordered him to keep his Bed for a month, keeping his Legs as close together as he could, not spreading them abroad: to keep a drying diet, unless perhaps he took a few stewed Prunes, to loosen him: to eat nothing windy, crude, and hard of digestion, except feet of Hogs, Kids, or Sheep. And he used these Medicines; Take of *Terra Sigillata*, Comfrey-root, true Bole-Armenick, each 2 drachms, burnt Hartshorn 1 drachm. Let him take for 14 or 15 days 1 drachm and an half, or 2 drachms, every morning in Capon-broth. Then take of Dragon's-bloud, Mumy, Mastich, Frankincense, Comfrey-root, Bole-Armenick, Red Snails, Hedge-hog powdered 1 ounce. Let them all be incorporated with the Turpentine, make a Plaster, and apply it to the Groin. Yet let universals be used before.

Idem.

Riverius.

IV. In fitting the *Splenium* to the Truss, our chief care must be to make it fit, that it be not round like a ball, as they are usually made by unskillfull Chirurgeons: for when they are so extuberant, they drive the Groin too much inward, that the torn membrane cannot chuse but keep open continually, and will never knit. So also it comes to pass, that the Gut bursts out, upon any violent motion, and notwithstanding that turgid round *Splenium*, it slips down into the *Scrotum*: Therefore the *Splenium* must be three-cornered, large enough for the

Hernia, or, A Rupture.

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Medicines.

I. THE Groin is the usual place for Ruptures; but do not persuade your self, that the *Peritoneum* cannot be dilated, or burst in other places,

the Groin affected, so gently supported, and covered with a plate outwardly convex a little, or with some hard renitent matter, that the inner *Superficies* may not be plainly extruberant, but so made, that it may be firm, and as it were a little concave, which may neatly receive the Groin, and may gently press it, when it is every way aptly comprehended.

Solenander,
Sect. 4. c.
23.

Fortis.

V. A Truss must be fitted to each Groin; for if it be applied but to one onely, it swells the other, and easily causes a *Bubonocèle*.

Vesichius.

VI. They that go about to cure Ruptures by Section, let them first see and diligently enquire, whether the Intestines, fallen into the *Scrotum*, through the processes of the *Peritonæum*, and straitened by the narrowness of the way, have contracted a Gangrene: for then, though they cut never so well, the Man will dye the next day. And it will be thought that the Chirurgion has killed him. Of which thing *Stegelius* observed examples in France.

VII. Being called to some too late, when the Gut was inflamed, so that it could not get back again by the narrow hole in the broken *Peritonæum*, for the Swelling, I saved three Patients from present death by dilating the hole with incision, thus; First, I place him, as I said before, for reposition, binding him fast, so that he cannot stir in the operation: After this, I draw a transverse line with Ink over the line of the strangulation of the Gut, where the Rupture of the *Peritonæum* is. Then I draw another line, to cut the former perpendicularly, just upon the place of Strangulation, and in the middle of it: then I take up the skin between my two fingers, on each side, according to the transverse Section, and cut it with a Razour along the perpendicular, about 2 inches in length: Then the muscles that cover the Rupture are elevated by degrees, and separated with a Penknife, till the production of the *Peritonæum* be laid open: And when it is laid open, it is cut open with the same Penknife, and in this manner the Gut is put up again. But if the Gut be so swelled with the inflammation or wind, that it cannot be thrust back into the *Abdomen*, the apertion already made, may be amplified, by putting a cannulated Catheter into the Wound, upon which lithotomy is made, and the *Abdomen* may be cut upon it with a pair of Scissers, above or below, as the Chirurgion shall think meet. ¶ In the City of Padua I observed intestinal Ruptures often wedged in, attended with black Vomiting, and tending quickly to death. I opened three dead persons, and with the greatest care examined the falling down of the writhen Gut *Ileon*, and the manner how the Excrements were wedged in. Thence being emboldened, at my earnest request to the Patient and By-standers, I ventured on cutting, though very dangerous, and GOD blessed it. I eased the Gut by cutting the skin, the process of the Muscles and the *Peritonæum*. When it was put up, and suture made, the wound was cured without any subsequent Rupture.

Riverius.

Rosinccius.

VIII. I have been spectatour to a Frenchman, who successfully cured many in a very safe method: for it is done with little or no pain, and the vessels are not tinged with blood, and therefore may better be seen and handled: And it is the more desirable in Males, because it may be done without cutting out a Testicle. He applied a potential Cautey a little above the Region of the Testicle, on the broken side, where the Bag falls into the process of the *Peritonæum*, in such a quantity, that by mortifying the skin about half an inch in length, he made an Eschar: Which being cut off, he applied another Cautey, till the skin being quite taken away, the fat appeared, which he cut with a pair of Scissers, till the process that carried the seminary vessels appeared: Two days after which was done, he separated these vessels from the process artificially with his fingers; and with a crooked Needle he drew a

Thread underneath, and tied the process gently, putting him then to no pain at all. The Thread afterwards, in success of time, falling off, and Sarcotick Ointments applied, he produced flesh there by degrees like a *Callus*, which grows the more easily to this process, because the red Coat, called *Elythris*, is carnosus and muscous; and so by pressing and filling the place of the lost substance, he stoppt the falling down of the Guts, and so perfectly and happily performed the cure.

Platerus,
Tom. 3. c. 22

IX. Castration exposes the Patient to manifest danger of death: for they that castrate, do, for fear lest, when the cure is finished, a relaxation should remain, by their violent drawing, draw aside the process of the *Peritonæum* from the parts to which it sticks, and also a Nerve of the sixth conjugation, which goes to the testicle; from which things arises great pain, convulsion, bleeding, inflammation, putrefaction, death. But they that escape these dangers, are deprived of their generating faculty. Wherefore I should never subscribe to the cutting out of the stones, unless perhaps a *Sarcocèle*, or a Gangrene seize them.

Parvus, l. 7.
c. 16.

X. There is a late invention of the Spaniards to cure intestinal Ruptures, without cutting out of the Stones. They make a simple Section lengthways along the process of the dilated *Peritonæum*, they thrust the Testicle of the side affected into the capacity of the *Abdomen*, and then making a golden puncture, they heal the wound. But because after this cure all are made barren, if it be done on both sides, Counsel was desired from Rome concerning Matrimony, Whether such could lawfully Marry, as being unable to get Children? We expect a solution of the difficulty. ¶ But the most skillfull Chirurgeons do not approve of this way of cure, because, if the hole be larger than the stone, it quickly falls down again, and the Patient is as bad as before; and because, if the stone be larger than the hole, if it be straitned it is pained, whence follows inflammation, barrenness, or death.

Henricus 2
Monichen,
Obs. 24.

Scultetus;

XI. Be not unmindfull, how that the edges of the burst *Peritonæum* in old Men, and old Ruptures, are sometimes so hardened with a *Callus*, that they cannot grow together again, though they are never so accurately brought to mutual contact; but in this case the business must be done with Trusses: But in children they grow up easily, so that here Swathes seem more proper than the best Truss-Barbette; ses.

XII. *Valescus de Taranta* says, that he who presumes to cure a cacoehymick, a weak or an old Man by incision, does plainly desire to be accounted a Murderer. Yet *Hildanus*, Cent. 6. Obs. 73. shews, by an example, that it may be done in decrepit Men, upon extreme necessity, if so be the Inwards be sound.

XIII. If an Inflammation and the excrements concur in hindring the reposition of the Gut, the case indeed is very desperate, yet nevertheless a discharge of the Excrements must be attempted by Baths, or Fomentations, which relax the distension, and by lenient Clysters, letting alone the taking of Purges by the mouth, which otherwise would cause a greater afflux of the humours to the part affected, and according to *Fallopins*, hasten the Patient's death.

Scultetus;

XIV. Some deny, that Clysters may be given, when the Gut is fallen into the *Scrotum*: But the falling down of the Gut must be distinguished, which is either but falling, or is fallen and inveterate. I reckon it is falling, in the beginning, as soon as the Gut falls into the *Scrotum*, and increases the Malady, then it is better to loosen the bound body with a Suppository, and then to apply a bag of Roots of emollient Herbs, Flowers and Seeds, than to give a Clyster presently, lest it should fall with the Gut into the *Scrotum*, and make it worse: I reckon it is inveterate, when the Gut has been for some days kept in the *Scrotum*, so that bad Symptoms,

proms, hardness, tension of the *Scrotum*, pain, vomiting, restlessness, &c. torment the Patient: in these, Clysters are not onely convenient, but necessary; nor need we fear, that they can easily fall into the *Scrotum*: For when the Gut is inclosed in the hole of the *Peritonæum* and the Sheath, and therefore compressed, it is scarce possible, that the Clyster should get into the *Scrotum*. In the mean time the giving a Clyster makes the Gut soft and slippery, allwages pain, and discharges wind, all which things are requisite.

Hildanus.

XV. I ordered one, who had a perfect rupture, among other proper things, to stop the coming of it down with a Truss, which he used for the space of six years, and at length he affirmed he was well: And indeed, when his genitals were examined, no sign of a Rupture appeared. When he was dead, I searched by what means Nature had hindered the falling down of the Guts. And I found a fatty substance about the hole in the process of the *Peritonæum*, about the bigness of a Tennis-ball, so close knit to the said process, that it could scarce be separated without tearing the adjacent parts. I have known others, who have been cured by constant wearing of a Truss, and by that alone; who, being formerly lean, and afterwards fat, fat has gathered about the Guts, which has made them swell, and so there was no passage for them into the *Scrotum*.

Patzus.

XVI. Mr. N. above 50 years old, says, he was cured onely with a Truss, and often taking Saracen's confound, and Thorow-wax in Broth, with the fat of a Hen, Honey and May-butter: But he used these things a year.

Cur. Mifc. obs. 306. 47. 92.

XVII. The descent of the Gut, by the holes of the Tendons, which are alternately disposed, must be observed, lest in putting back of the Gut, which is done by Chirurgical operation, it should be put among the *Aponeuroses*, for the hole of the last Tendon must be cut, that the Gut may be thrust back, in which thing many Chirurgeons mistake, even the most skilfull, to the hazard of Life.

Riolanus, Enchir. p. 161.

XVIII. Chirurgeons are very earnest to have an Incision made in the *Scrotum*, to let out the watry humour; and they doe well, in my opinion. But it seems an absurd thing to me, that this Incision should not be made in the lower part of the *Scrotum*: for when the Testicle is wholly elevated, Section may more safely be made in the bottom. Neither have I observed, that any harm followed upon it hitherto. Nor let any one say, that a Tent put into the emissary made below, does prick the Testicle; because a skilfull Chirurgeon prevents that.

Amatus, cent. 2. cur. 84.

XIX. J. Vellingius reported, that he formerly saw in Egypt a Man threescore years old cured of an *Hydrocele* by burning with Flax, a thing familiar with the Egyptians, above the shoulder blades, on each side in the Neck; and in like manner upon the Groin, at the root of the process of the *Peritonæum*, the aqueous Tumour vanishing by degrees, without the help of other external things.

Rhodius, cent. 5. obs. 38.

XX. Let the Chirurgeon be cautious in making Section, because of bad Symptoms, that supervene, especially let him not go about this operation, till the body be well prepared. But if he know, that there is any intemperature or fault in the Kidney, let him either abstain from the operation, or let him cut the *Scrotum* onely in the lower part, that the serous humour may run out. Yet let the passage be no way stoppt (as it is, when a Testicle is cut out) lest the serous humour, which cannot be drawn by the Kidneys, be retained in the *Abdomen*, but if need be, may run that way. I saw at Byzantium a Man threescore years old, whose *Scrotum* every year was perforated in the lower part for a *Hydrocele*, and the serous humour was evacuated, then the Ulcer was cicatrized, and he lived to a great Age. But if the Kidney be not in fault, and you would

stop the defluxion, it is convenient to make the incision in the upper part of the *Scrotum*, near the Groin: for the Chirurgeon has a two-fold scope.

1. To evacuate the serous humour. 2. To hinder it from coming afresh into the *Scrotum*: But because usually the water falls from the Body upon the *Tunica erythroidea*, and extends it, incision must of necessity be made in the upper part of the *Scrotum*: for so the dilated Coats are corrugated, and the Cicatrice hinders the water from falling easily upon the *Scrotum*. And that the operation may the better be performed, the Patient must not be bound to a form, nor lye on his back, but ought to sit in a chair, that the water may the better descend, and the coats in the Groin may more easily be separated and taken hold of with a Needle. Besides, let the Chirurgeon diligently examine all the signs concerning Ruptures, laid down by Celsus, Paulus and others, and let him diligently examine the nature of the disease, before he put his hand to the work, lest he make the disease worse. Besides, let him see, that the Body be not full of ill humours, nor any great fault in the Kidneys. But whenever the Chirurgeon knows that with the water there is flesh grown round about the Testicle, it is best to cut the *Scrotum*, to separate the Testicle, and whatever is grown about it, and to cut it off, if it may, by the root. For if the schirrhous matter have seized the process, or *Didymus*, and stick to the *Ab-*

Hildanus, cent. 4. obs. 66, & 67.

XXI. The cure of an *Hydrocele*, by simple puncture, is easie: but it always returns, unless the abundance of the redundant water be spent by a dry diet, as is observed by some. The most skilfull Chirurgeons, that they may remove all fear of a relapse, when the puncture is made, they put in a Wax Candle for a Tent, and with it gently velli-cating the process of the *Peritonæum*, they cause some inflammation in the upper part of it, after whose suppuration the process is more united and contracted, nor does so easily as before receive the humours into it. Some, instead of a Candle, put in a Leaden-pipe: but I have seen unhappy instances of it: for, by pricking too sharply, it caused greater inflammations, whereby (to say nothing of a Symptomatick Fever, which, contrary to the expectation of both, carries off the Patient) there is a greater confux of humours to that part, so that the whole Testicle being forced to imbibe it, has laboured of a *Sarcocoele*.

Henricus 3 Molinicher, obs. 18.

XXII. If the *Scrotum* be very much swelled, we must come to *Paracentesis*, or pricking, yet so, as that immediately after the Water is got out, a cicatrice may be made, Nor must the hole be kept open with a Pipe or Tent of Lint; for thence there would be danger of a Gangrene.

Silvaticus, cent. 1. cons. 17.

XXIII. A Noble youth, being ill of a *Hydrocele*, had divers Medicines prescribed him for four years. His Parents desired of me, that I would try to cure him any way, without the loss of his Testicle. I consented, and hoped that within three weeks I might perform the cure: for nothing appeared outwardly but Water, without any hardness, so that I thought there was onely Water. But after I had prepared and purged his body, when I had perforated the *Scrotum* without pain, with my Caustick, and the third day after had separated the Eschar, besides the Water I found a certain fleshy hard substance, about the Spermatick Vessels: After Excision therefore of the Eschar, when some of the serous humour had run out, a great pain, but momentary, arises suddenly in the bottom of his Belly, especially about the right Groin, the part affected: The night following the *Scrotum* swelled a little, and there was a very hard Swelling more plainly found in the upper part of the Sheath, round about the Spermatick Vessels. Then the

P P violent

violent and exceeding dangerous Symptoms, which I have sometimes known proceed from such openings, came into my mind. The same thing happened to *Griffonius*, a most excellent Medico-Chirurgion, who, when he had opened the *Scrotum* of a Savoyard, besides a *Hydrocele*, there was also found fleshy-matter growing to these vessels, which turned into a Malignant Cancer, whereto he applied Medicines, the Knife and Fire, to no purpose.

Hildanus,
cent. 4.
obs. 63.

XXIV. Sometimes a *Pneumatocoele*, or Wind-rupture is caused in the four Vessels, which nourish the Testicles, or in the intercurrent Arteries of the *Dartos*; The former tumour is harder, and gives not way to the finger, when touched, and admits of a cure: This latter goes in again and vanishes, if pressed with the finger, and is scarce curable, because of the danger of incessant bleeding. ¶ Wind may also be taken away by Chirurgery or Section. Yet that which comes from the Arteries, we reject as desperate. The other before-mentioned we cure like varicous ruptures. See Sect. XXX.

Geiger. Che-
legr. cap. 3.

Idem, c. 13.

XXV. *Aquapendent* goes a safe way to work, *Pentateuch. Chir. lib. 1. cap. 29.* if an aqueous rupture be joined with a carnosus. But if there be no Water, you must let alone the operation, because whether you cut or no, the case is dangerous, and perforation onely may cause a Gangrene. You may see before what Hildanus says.

Silvaticus,
cent. 3. conf.
74.

XXVI. The Noble N. complained of a great *Sarcocoele* of his left Testicle, which, universals premised, and a good course of Diet, I insensibly dissolved, with the following Plaster and Powder of Rest-harrow, which *Matthiolus*, l. 2. c. 18. commends; Take of Gum Ammoniack, *Galbanum*, *Bdellium*, dissolved in Vinegar, each half an ounce; add of Ducks-grease melted and strained half an ounce, yellow wax two ounces, Oil of White Lilies, the Marrow of a Beef marrow-bone, each 10 drachms. Make a Plaster. Spread it on a Linen-cloth, apply it to the *Scrotum*, and renew it every fourth day. He took a drachm of the Powder of Rest-harrow in a draught of Wormwood-wine every morning. He had an Issue made in his Thigh, four inches above his Knee, and continued the use of the foresaid Medicines, so that in four Months time he was perfectly well. Several others have, by degrees, recovered, with the use of this Powder alone.

Scultetus.

XXVII. Impure blood is not the cause of a carnosus Rupture, since even the best may produce it: Nor simply abundant, since it shews it self even in lean bodies; although in these it never arrives at that bigness which it does in others. But indeed, I believe, the true cause of the Rupture consists in this, when the Membranes, which use to shut the mouths of the Capillary vessels, and hinder the nutritious blood running too suddenly into the part, are either eroded, broken, or dilated, whereby it then comes to pass, that more blood runs into the part, than is required for its nutrition. Nature, in the mean time, turns the blood, which would otherwise putrefie, into flesh. It must be observed also, that this flesh grows sometimes to the second of the common coats of the *Scrotum*, and not to the Testicles, in which it may be taken out without hurting or excision of them. In the beginning, when the little membranes of the vessels, being eroded, broken or dilated, do permit too great plenty of blood to pass, we do much with the use of repellent and astringent things: But if it begin to grow big, these remedies suffice not to root out the evil; yet it must be attempted by the means following. Make a little hole in the *Scrotum*, rather in the upper than in the lower part, through it, by help of a rag, apply suppurating Medicines, that by this means, if it be possible, that flesh may be taken away: But every visit all the Pus must not be let out, that the relics of the flesh may so much the better be consumed. But if these things succeed not; The Testicle must be taken out with the Rupture.

Barbette.

XXVIII. Yet the cause ought to be searched diligently before the Chirurgion set himself to the operation: for sometimes the *Parastatae* are so swelled, especially when the Testicles are scirrhus, that they might easily deceive you with the shew of a carnosus rupture. 2. The Spermatick vessels being kept in the *Scrotum*, do often, by a *lufus naturae*, exceed the Stones themselves in bigness; and cause no other inconvenience but fear, which I have found true in more than one.

Idem.

XXIX. We must observe in a Ligature, which is made, when the Testicle must be taken away together with the Rupture, that it must be made as near as may be to the Tumour: for the higher the process of the *Peritonaeum* is perforated, so much the thicker it is observed to be; which thing will hinder suppuration, and the falling off of the thread.

Idem.

XXX. A Varicous Rupture is easily known, because a multitude of Veins and Arteries appears on the superficies of the *Scrotum*, involving the whole *Scrotum* with their vast extension, as a Vine twists round a Tree. The cure of it, as also of a carnosus one, *Avicenna* says, is the cure of hard Imposthumes; and oftentimes indeed anointing with asswaging Fats and Marrows is sufficient in a varicous Rupture. But if those things, which are good for a varicous Rupture, will do no good, we must proceed to Chirurgery, and the cure must be insisted on, either by incision, or a potential Caustick. Incision is performed in this manner; When the Patient is fixt in a proper posture; handling the *Scrotum* we drive down the Nerve, whereby the Testicle hangs, into the lower part; which indeed may easily be distinguished, because it being firm and strong, feels smaller and more solid, and renitent than the veins, and if it be prest, causes greater pain; and besides, it lies near the virile member, which being depressed, we take hold of them with our own and our assistants fingers, and draw them this way and that, and violently extend them; then we cut the skin, over against the Veins, drawing the Knife gently and obliquely; then with hooks fixt in we cut the parts underneath, and separate them from the Skin, and when the Veins are bare, we run a Needle with a double thread underneath them, and then we tie them with the thread, cutting a *Sinus* in two places, where the varication begins, and where it ends, yet having first made incision lengthway, and let out the blood; afterwards we cure it with things that breed Pus, till the thread and the veins also fall off. So *Leonides* advises us to do, when some of the vessels which feed the Testicle are varicous; for if all of them be so, the Testicle must be taken together with them, lest, when it wants nourishment, it should corrupt. This Rupture also may be cured with a potential Caustery, unless the Varication be too great. If therefore it be more in the ambient Veins of the Testicle, than in the *Scrotum* (for then an excessive haemorrhagy might be feared from the corrosion of those large Veins) the Caustery must be applied in greater plenty, that it may not onely burn and waste these Veins, but the Testicle also: for so the crust will be stronger and thicker, which will hinder any excessive haemorrhage.

Geiger. Che-
legr. c. 13.

XXXI. Because it may be feared, a Vein may grow varicous in the *Scrotum*, therefore the *Scrotum Fortis* must be anointed with *Oleum Saturni*.

XXXII. Since the matter of a varicous Rupture is melancholick Blood, poured from the upper parts upon the *Scrotum*, either by critical transmutation of the melancholick matter, or the termination of some Sickness: Or it is caused by a Spleen, weak in drawing melancholick dregs from the Liver; or the Liver not expelling the melancholick Blood as it ought; besides external causes, which multiply melancholick Blood. That it may be rightly cured, we must abstain from such causes,

ses, then, when the common excrements are discharged, Blood must be let out of some lienary Vein, for usually such ruptured persons have an obstruction in their Spleen, and find a pain in their left hypochondrium; then we must use Decoctions; to purify the Blood, and remove obstructions of the Spleen.

Geiger. Chel-
leg. c. 14.

Medicines especially made use of by eminent Physicians.

1. This is admirable for a Rupture of the Guts, which we have tried, and so cured, that others have admired. Let Paper lye three days in Water, till it have soaked up the moisture, like a Sponge: Make a Ball of it, and when the Gut is put up, apply it to the Groin, bind it on with some convenient Ligature, and do not remove it for three days.

Abius.

2. When, because of the Swelling, the Guts cannot be put up again; Boil some Oats in a sufficient quantity of Water, then add half a pound of fresh Butter: boil it again. Then let the boiled Oats be put in two Bags, and by turns let one of the Bags be put into the Water, and so foment the part, and put up the split Guts gently with the Bag. This Remedy has been found very beneficial.

Loyse Bour-
gois.

3. This is admirable good in all Ruptures; Take of root of white Carline Thistle, Dove's-foot dried; boil these two in red styptick Wine, give a draught of the Wine sometimes in the morning.

Brendelius.

4. A Plaster of Hare's-down burnt, with Powder of Comfrey, mixt with Oil of unripe Roses and Pitch, is excellent.

Claudius.

5. In the month of May there are Bladders found upon Elm-leaves full of Water, which is peculiarly good for Wounds and Ruptures. The round things, which hang upon Oak-leaves gathered in the month of May, and exposed to the Sun in a Glass, do dissolve of themselves into Water, which anointed on the Rupture, is good.

Crollius.

6. Ruptures are cured with the depurated Juice of Rupture-wort, which is mixed with Bean-flower, and applied to the part for 15 days, the Patient keeping his Bed all the time. ¶ Spirit of common Salt and Sal Gemm, if 3 or 4 drops of it be taken in the morning, with Flix-wood or Comfrey-water, is a great secret for curing a Rupture.

Faber.

7. I have had great experience and much success of this; After the Gut is put up, let the Patient for 20 days take of prepared Steel 1 scruple, mixt with 2 scruples of Sugar, and drink a little Malmsey-Wine upon it.

Fallopious.

8. A Man of fifty had a Rupture, which grew as big as one's Head, and hard, which could be softened by no Fomentations, nor put up. I gave him a draught of Wine just boiled up once, with some Anise, Caraway and Fenil-seeds bruised, and the Hardness immediately was softened, and the Rupture was put up.

Van Hel-
mont.

9. Let a Load-stone powdered be given in Potage, then let the Groin, through which the Gut slips, be anointed with Honey, and fine filings of Steel strewed upon it, this Remedy must be used for several days, and the part affected must be carefully kept up with a Truss.

Hofmannus.

10. It is evident from infallible experience, that the Root of Wake-Robin has a singular Virtue against Ruptures: About a drachm, or a little less, given in some convenient liquor, not onely draws back the Prociency, but heals the Rupture of the Peritonæum, if either the Patients lye on their backs in bed, or if they use a Truss.

Laurenber-
gius.

11. In a windy Rupture I have often experienced this, *Emplastrum de Vigo cum Mercurio* and *Emplast. Diachaliteos*, dissolved into generous Malmsey-wine, with Oil of Bayes.

Patrus.

12. Greater Ants, distilled with Bread, if every day in the morning, carious Ruptures be anointed therewith; or a little of the Water be taken, doe good.

Petrus.

13. Some commend this as a most certain Cure; Take of white Cichory, gathered about St. James Tide 3 pugils, Pasque-flower 2 pugils, Seed of Thorow-wax 2 pugils. Make a Powder. The Dose, as much as one can take up with his three fingers in some flesh broth, at Dinner and Supper, till the Patient recover. 2. Take roots of Elecampane, Sanicle, Comfrey, *Saracen's Confound*, each what is sufficient, make a Decoction in Water, to the Consumption of half. In this Decoction hot wet Cloths, and let the place affected be often fomented and afterwards anointed with the following Unguent. Take Oil of Eggs and Tormentill-powder. Mix them. Make an Unguent.

Sennerius.

Hydrophobia, Rabies, Fear of Water, Biting of a Mad Dog.

The Contents.

Whether a Vein must be breated? I.

When it may be breated? II.

Whether we must purge? III.

At what time. IV.

With what we may purge, and with what we may not? V.

Throwing into the Sea is good. VI.

The bitten part must not presently be cut off. VII.

An Example of a happy cure. VIII.

Medicines.

I. Some think Venæsection not at all proper for the Biting of a Mad Dog, because it draws the Poison through the whole Body into the Veins; yet *Avicenna*, l. 4. sen. 6. tr. 4. c. 9. writes, that blood must be let after the fourth day; and that not onely once, but twice, especially when a Man has not been bled immediately after the Bite, and when Blood abounds: Yet some modern Physicians, after the Biting of a Mad Dog, to prevent Madnes, are so abhorrent from Blood-letting, that they maintain it must be avoided, as a thing which by emptying the Veins, causes the Poison to penetrate deeper: But these Men seem to think that the Venom of a Mad Dog is not dispersed all over the Body, till the Fear of Water seizes a Man. Which, notwithstanding, the gravest Authours do shew, is false, *Avicenna* and *Celsus*, *Dioscorides* also, l. 6. c. 39. when after the first days he rejects the Knife and Burning in the bitten place, as useless, but orders Sweat before and after Meal, does manifestly shew, that the Poison is diffused all over the body: which he seems to confirm, when he adds Plasters and Synapisms by turns all over the body: yea, *Avicenna* in the forecited place says, that it may not onely happen, that the venom may be dispersed after the fourth day, but in less time. Therefore in this so important a case we must distinguish; if we be in the first days, when the venom is yet in the Wound, or is contained not far from it, then Blood-letting must by no means be used, and the reasons clash: For it would draw from the circumference to the centre, from the small Veins to the great, and therefore from the less noble to the more noble parts, and to the Heart it self. But if it be already dispersed, then Blood must be let, as *Celsus* shews: but not in a place near the Bite, because then it is not convenient, as *Avicenna*, imitating *Dioscorides*, shews; for then there is no occasion for or benefit in such a thing, but from the Arm, that the Poison then diffused may be drawn out of the greater Veins and the whole Body.

Rubius, in
cap. 27.
lib. 2. l. 5:
Celsi.

II. Bleeding is by no means convenient in the beginning, as it is when the Poison has dispersed it self into the humours. ¶ In Biting of Animals Venæsection is not convenient, unless the venom be dispersed all over the body, or there be plenitude. Jac. Ponc.

P p 2

¶ But

¶ But if an acute Fever happen, Bloud must not be let within forty days; but scarifying in the lower parts, and opening of Veins in parts most remote from the Bite, must be used.

Sancta crux.

III. They that deny the taking a Purge, doe it chiefly on this score, because the nature of this venom consists not in first and manifest qualities, but in occult; and is not cured by the alteration of the first qualities, nor by Purgatives, but by Alexipharmacks, and things that act by their whole substance, because Purgatives are enemies to our heat, and therefore seem rather to waste than preserve strength. Others, on the contrary, admit of Purgatives, who indeed confess that Purgatives do not directly oppose and purge out this Malady, but this is done onely by peculiar Alexipharmacks; yet in the mean time they judge that they may doe this mediately, namely, while they carry off the vitious humours where the venom resides, and so they at the same time evacuate the poison, especially because this is a slow poison, and carries long in the body.

Sennertus.

IV. Rhases, tr. 8. ad Almanf. judges we must purge Melancholy in the beginning: but others both Greeks and Arabians forbid it in the beginning, that is, when the venom does yet reside in the external parts. But here we must consider, how this poison gets into the body; for if the poison be drawn into the body with the Lips and Tongue, we may purge at first, because we have no other way to get out the poison; but if the poison be communicated by Biting, to the external parts, we may not purge in the beginning. Therefore when Rhases says we may purge in the beginning, it must be understood of the former case; But the Greeks and Arabians, of the latter, when they forbid the use of Purgatives in the beginning, lest the venom be carried from the wound to the inner parts of the body; but then at length a Purge must be given, when all things are done about the wound, as they should, and although when all things are done right, there may be hopes, that the poison will be extinct: yet since it may easily happen, that some portion of it may get to the inner parts; this, be it never so little, corrupts the humours, and changes them into matter, like to it self. And therefore these corrupt humours must be evacuated, that the venom may be evacuated also, and that other humours may not be infected by the venom and corrupt humours, Alexipharmacks in the mean time not being neglected. All the Ancients commend white Hellebore for purging, and things which respect the melancholick and black humour. They that fear white Hellebore, may use black; or Agarick, to which an Alexiterick virtue is ascribed.

Idem.

V. Some proceed to the use of Antimony, as by agitation and violent commotion of the humours it is able to carry off the poisonous humours from within. Indeed some preparation of the humours premised for five or six days, a strong Purge may be given. So Dioscorides writes, that one near to a Hydrophobia recovered by taking Hellebore, and Orbasius gave a Purge every day of Colocynthida, to the quantity of a Bean. We may give Electuar. Diaphan. with Confectio Hamech or Extract of Hellebore to half a drachm, mixt with Cassia: Which chologogue Medicines are proper, because the Canine venom contains adustion, especially if the Complexion be hot and dry, or the Habit of the body Lean or Cacoehymick. After all which Purges, nevertheless, store of clarified Whey must be drunk, and they must often be repeated. Nor must Rhases be heard by any means, who, contrary to the common opinion both of the Greeks and Arabians, advises the giving of strong Purges not onely in the progress but at the beginning. ¶ I saw a young Man lately bitten with a Mad Dog, who was killed by taking an Infusion of Antimony the same day, although the violence of the Poison had not as then

Fortis.

caused a Delirium; for he warned all about him from coming near him, because of his inclination to bite.

VI. From the venomous biting of a Mad Dog fear of the Water arises, in which they are killed with thirst, and yet they do not drink, of which misery the onely Remedy is (according to Celsus, l. 5. cap. 27.) to throw them into a Pond unawares, especially if they go that way before they fear the Water, otherwise, according to the same Authour, there is but small hope, and it is according to Experience also, the truest Mistress. This sort of Remedy is of such value among our country People, that being content with it alone, they scarce desire any other, nor without good reason, since the Sea cures all: Nor have I as yet seen one (though I have seen many) who, if he were timely thrown into the Sea, ever found any harm afterwards. But if this Remedy were either slighted or feared or used late, many have paid for their negligence.

Tulpius, obs. l. 1. c. 20.

VII. Some, if the nature of the part will bear it, think the part must immediately be cut off, after the example of them that being bit by an Asp or Viper, have cut off their Fingers, and have escaped. But this seems not so necessary, seeing the venom of a Mad Dog is not of such speedy activity, as the poison of an Asp or Viper, and may well enough be evacuated otherways.

Sennertus.

VIII. At Venice I saw a Mother and her Son bit by a house dog at one and the same time in Summer. He bit the Son's thumb and forefinger of his Right hand, and the Mother's Arm, a little above her Wrist, and I found signs of Madnes in the Dog, he was leaner than ordinary, his eyes red, his tail hanging, foaming at the mouth, his tongue hanging out, tinged as it were with yellow bile, running up and down disorderly, and then stopping on a sudden, he would neither eat nor drink, though his panting shewed his great thirst. Thus being sure of the Madnes of the Dog, I went to cure my Patients; 1. By intercepting, recalling and extracting the venom. 2. By hindring the venom from creeping to the inner parts, and from diffusing it self through the whole body. 3. By opposing the quality of the poison with Alexipharmacks. Immediately therefore Deligation was made above the part affected, an Astringent being applied underneath made of a binding Powder, white of an Egg and Rose-water, which we applied to the Boy while we were curing the Mother. Then I ordered the lips of the wound to be scarified round about, and then a great Cupping-glass to be applied with much flame. Then, the Wound being first washed with all Wine warm, because water is very hurtfull, I ordered a Plaster to be applied of Onions and Garlick bruised, adding some Wall-nut, Rue, Leven, Salt and Honey. In the mean time I ordered the Dog to be killed, the Liver to be taken out and washed with Wine, and the Medicine described by Galen, 3. K. T. cap. 5. to be made, and of all them that used this, he never saw one dye; Take of Pitch 1 pound, sharpest Vinegar 8 ounces, Opoponax 3 ounces. Mix them according to Art: to this I ordered to be added half an ounce of the Powder of the said Liver, which by a specific property draws out the Canine poison. But to the Boy, who had a wound in his Thumb and Finger, because he would not endure Cupping, Scarifying or Burning, I ordered several Leeches about the Wounds, and then applied the same Plaster that his Mother had. I prescribed both of them a Decoction of Alysson or Madwort and Gentian in distilled Carduus-water, adding half an ounce of Cinnamon-water, having first given a Bolus of Treacle to the Mother, and of Mithridate to the Son, reformed with the Powder of Terra sigillata virga. I ordered their Pulses in their Temples, Arms and Legs to be anointed every three or four hours with Oleum M. Ducis Hetruria, and de Scorpien. Matthioli mixt together.

I did

I did not forbid them Wine, but I forbid them Sleep, till night. The next day I found the Mother had done all that I ordered her, and the Son nothing, so that the little wounds were almost healed up, and seemed to be slighted: nevertheless, I applied *Galen's* Medicine to them both, and ordered them the same internal things again. In the mean time for the third Intention, letting alone dubious things, I had recourse to true Alexipharmacks; the Powder of River-Crabs, which are brought from *Arno* a River of *Florence* hither; Take of Powder of River-Crabs 10 drachms, Gentian 10 drachms, Frankincense 1 drachm. Mix them. The Dose, a great spoonfull to two. I would have them prepared for the whole year; And the Crabs must never be burnt before the rise of the Dog-star, but when the Sun is in *Leo*, and the Moon 18 days old, in a Platter of red brass, which *Galen* gave for 40 days. They took these things for 7 days; after this they began to take the Powder of Crabs in *Scorzonera* and *Carduus benedictus* water; and in the mean time the Chirurgeon treated the Wounds like others; yet he hindered healing of them, and kept them wide open above 40 days. But as the Mother was observant in all things, (who took Powder of Crabs 40 days, kept the Wound open 50, applying in the mean time bruised Walnuts frequently to the Wound, which at the first day being given to Hens, killed two, after the seventh they were harmless, and had no sign of poison in them) so the Son was delinquent in all, whom his Mother observed to be thirsty in the first days, and to drink beyond his custome and out of reason, who notwithstanding about the twentieth day began to abstain from drink, and to be penfive and silent, he began to talk strange things, to loath his Meat, to have the Hickup, and at length, having had some convulsive motions, on the twenty seventh he died; but his Mother recovered.

Fortis, cert.
1. conf. 20.

Medicines especially made use of by eminent Physicians.

1. The Rennet of a Whelp is extolled by *Aëtius* in an *Hydrophobia*. For if it be but once taken in Vinegar, he says, they presently desire Water. In this Disease nothing is more wholesome than to drink Water, which ceasing, Death is at hand. ¶ The only Remedy against the Bite of a Mad Dog is root of wild Rose-tree.

Baricellus.

2. This Electuary of *Palmaris* is highly commended by the Moderns; Take of leaves of Rue, Ver-vain, Sage, Plantain, Mint, Polypody, Wormwood, Mugwort, Balm, Betony, lesser Centaury, *S. John's*-wort, each equal parts. Mix them. Make a Powder. The Dose 1 drachm and an half in broth every day in the morning before Meat.

Blasius.

3. In this Disease we may also use the Liver of the Mad Dog, which is more approved when applied, than given inwardly.

Hildehelm.

4. One says, that Burnet taken for several days in the morning certainly cures an *Hydrophobia*.

Maroldus.

5. *Dioscoridis Alyssum*, or Mad-wort is highly commended by all Men, as is also a Decoction, and Ashes of River-Crabs, mixt with good store of Dill.

Sennertus.

Hydrops Pectoris, or, A Dropsie of the Breast.

The Contents.

We must be cautious how we purge. I.

The Efficacy of Calomelanos. II.

Cured with Sudorificks. III.

Whether Tapping be good? IV.

The Cure, by boring a hole in the Rib. V.

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I. THIS must be carefully observed, that when the Disease is confirmed, and great store of serous humour is gathered in the Breast, if a violent Purge be given, these humours are much disturbed, whence a great Suffocation comes upon the Patient, which quickly carries him off. Therefore we must act cautiously, and Medicines must be given by repeated turns, and they must be mixt with strong Aperients and Diureticks, that the passages may also be opened, and part of the serous matter carried to the ways of Urine. Among Hydrogogues, those that are made of Minerals are most proper in this Disease, such as *Mercurius dulcis* and *Mercurius vitæ*, so corrected, as to evacuate one-ly by the lower parts.

Riverius.

II. A Man of fifty had been ill of a great difficulty of Breathing for three months, nor was he relieved by Medicines. I reckoned he was ill of a Dropsie in his Breast, because there was no Cough nor Ratling, no viscid and thick Spittle, as in a true *Asthma*: his Legs also were cedematous, and his Belly began to swell: He had not lain down in Bed for two months, but sat panting and choaking in his Chair, and was ready to draw his last. Because I despaired of his Recovery, I was unwilling to prescribe him Medicines, but being prevailed on by importunity, the next day I gave him a Bolus of Calomelanos 1 scruple, *Diagridium* half a scruple, with Conserve of Roses. It purged him seven times, and he voided abundance of serous matter, upon which he found much ease that day, and breathed more freely. After two days the same Medicine was repeated, with the like success, and the night following he lay down in Bed, without any oppression of his Breast. When the Swelling of his Belly was abated, one might handle his *Hypochondria*, and I found his Spleen big and scirrhus, therefore I prescribed him Apozemes with Salt of Tartar and Spirit of Sulphur, and Fomentations and Liniments to be applied to the *Hypochondria*, with the foresaid Purge repeated every third day. Which being continued for 15 days, he was brought into a much better condition, so that he thought he was perfectly cured; but when one month was over, all the Symptomes returned, his Belly swelled more, and in two months more he died. Here the great efficacy of Calomelanos may be observed, which was able to doe so much good in a mortal Disease.

Idem.

III. Sudorificks are very good to discharge the serous matter, and I saw a Man of threescore cured by taking a Sudorifick Decoction of *Guaiacum* and *Sassa* for 15 days, by causing Sweat, with the vapour of Spirit of Wine.

Idem.

IV. It seems the safest way, that the matter should be evacuated sensibly by opening the Breast. And it should be done betimes, according to *Hippocrates*, 6. *Epid. f. 7. Ὡστεν δὲ τὰς ἀδύνας ἀνοίγειν, ἵνα τὰς συστροφὰς ῥαγίως, ἵνα τὰς συστροφὰς ῥαγίως*, Cut watry gatherings quickly, lest the Lungs be corrupted by the Water.

V. The ingenious opening of the Breast must not be past by, which *Hippocrates*, lib. de nat. Mulieb. propounds, when he orders a Rib to be bored through in the middle: for so the Water may by a Tent be more easily kept from running out all at once, than by making Section in the intercostal Muscles. Wherefore when Water is to be got out, it is best to boar a Rib; but when Pus is gathered in the Breast, it will be best to cut in the Muscles.

P. Marti-
nus.

VI. Evacuation of the Serum in the Breast must be attempted by Urine. The Emperour *Maximilian* the Second found great benefit hereby, who, when he had laboured of a Dropsie in his Breast with a Palpitation of his Heart for twenty years, he sometimes made 6 pounds of Water in one day, and when that motion of the matter stopt, he died.

Crato.

VII. A healthy, strong young Man, being formerly accustomed to immoderate exercise of Body, at length felt a fulness, or as it were a puffing up in his Breast, in so much, that the left side of his Lungs seemed to be swollen and the Heart seemed to be thrust out of its place, to the right side: Afterwards on a certain day he felt, as if some Vessel were broken within the cavity of the Breast, and after that for half an hours time, in that region, not onely he himself felt something fall from aloft into the bottom of his Breast, but it might be heard by the By-standers. Therefore, since it was without doubt, that then this Noble person had a Dropsie in his Breast, because the Lymphæducts (a great number of which branch themselves all over the Lungs) which run to their left side, being broken, dropt out their moisture into the cavity of the Breast, after some Medicines had been tried without any benefit, Tapping his side was unanimously resolved on. Therefore after provision had been made for the whole, the Chirurgion applied a Caутery between the sixth and seventh *Vertebra*, and the next day, having cut a hole in the cavity of the Breast, he put in a Pipe, which being done, immediately a thick liquour and white like Chyle or Milk ran out: About 6 ounces onely of this were taken away at the first time, and the next day as much: The third day, when a little larger quantity was let out, he was immediately seized with a great languidness, and was feverish and very bad for a day or two after it: Wherefore, till he had recovered his former temper and strength, we thought good to let no more of this matter out: But afterwards, a little evacuation of the same being made every day, the cavity of the Breast was almost all evacuated: And yet he carries a Tap with a Spigot in the hole, which being opened once in 24 hours, a little moisture still runs out. In the mean time he has a good Stomach, he looks well, and is strong, and goes about his usual business. After Tapping I ordered him Cordials, and afterwards a Traumatick Decoction, to be taken twice every day. But there is a necessity for preventing filth from gathering in the Breast, that this hole be left constantly open, instead of a Sink.

Willis.

Hydrops Anasarca, or, A Dropsie in the Flesh.

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 When a Stove does harm? VIII.
 We must have a care how we apply Issues and Blisters. IX.
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I. IN a simple Anasarca we may purge violently; and it often does abundance of good. And indeed from this Disease being sometime cured by Purging, Empericks have good opportunity to brag of their Cures, and some of their Medicines are indeed highly cried up for curing of Dropsies. For sooth if they chance ever to cure one or two of an Anasarca with specifick Hydragogues or Elatericks, they have enough to set out themselves and their skill, although they may kill an hundred A-sciticks with the same Medicine. Wherefore though

Preparations of Spurge or *Elaterium*, and other Hydragogues have sometimes done good in certain cases; yet if they be given indifferently to all Hydropicks, or at all to weak Constitutions, and such as have bad Inwards either in tone or conformation, they oftner kill than cure. And the reason why Catharticks operate more successfully and effectually in this Disease, than in other sorts of Dropsies, is, because in an Anasarca the morbid matter (which is the *Lympha*) resides partly in the mass of Blood, partly in the habit of the Body, within the pores and vacuities, among the ends of the vessels: Wherefore when a strong Purge is given, it presently exagitates and thins the mass of Blood, and fits it to excretion of any thing superfluous; and also it irritates the mouths of the Arteries, opening towards the Guts, so that the humour being rejected by the Purge, may find a passage by these outlets. Hereby first of all the Water fluctuating among the Blood, is plentifully washed away, then the emptied vessels soak up the intercutal Water, and they discharge it partly by stool immediately, and partly by urine or sweat. In the mean time there is no fear left, as in a Tympany, because the fibres in the Stomach and Guts are too much irritated by the Purge, these Bowels should be incited to tetaneous extumescencies. For while the Bowels are firm and well constituted, the particles of the Medicine doe them no prejudice, but, being thence delivered into the mass of Blood, they do not onely draw Water out of it, but by exagitating its mass, they raise the active particles, before overwhelmed, and dispose them towards a fermentative faculty.

Willis.

II. But sometimes it requires Letting of blood, when it arises from abundance of cold Blood. Indeed upon the account of its Coldness it does not stand in need of Heating, but because the abatement of its quantity eases Nature, so as she may the more easily conquer the Disease: It is not contrary; but very consentaneous to reason, to use Bleeding here. And we must evacuate after Bleeding, which Bleeding must be tried before any thing else, if strength will permit; for if it be low, though there be abundance of Blood, yet we must not let blood, till strength be repaired. ¶ It may very well be administered, if stopping either of the *Menses* or *Hæmorrhoids* have caused it, or if there be a bilious Cachexy: Yet Blood must be taken much more sparingly than in other Diseases, because of the want of Heat.

Trallianus, l. 9. c. 2.

Enchirid. Med. Pract.

III. We must carefully observe this, that in an Anasarca, as also in a Dropsie, what days evacuations, whether purgative or diuretick, are not given, always on those days opening Alternatives, and Strengtheners of the innate heat of the Bowels, especially that the altering and concocting faculty may be strengthened, must be given: for if these things be neglected, evacuators will doe little good.

Knoblochius.

IV. For curing an Anasarca, Lixivial Diureticks (as has ever been evident from my observation) do far excell all other Diureticks. For now it is a trite and vulgar Remedy, after Purging to take 6 or 8 ounces of a Lixivium made of Ashes of Wormwood or Broom, with White-wine, and to continue the use of it for several days. This Medicine, as I have observed in several, provokes Urine plentifully, so that the Patients, to a Miracle, recover in a short time. But why Medicines endued with a fixt and lixivial Salt, do force Urine more than those endued with an acid *Alkali*, or a volatile, the reason, I think, is this, viz. in persons affected with this Disease, upon the failing of the fermentation and sanguifick virtue of the Blood, watry and crude humours gathered both in its mass, and within the habit of the Body, after they have tarried a while there immoveable, then they (as it is the nature of all watry Juices when they stagnate a little) grow sowre, wherefore the Lixivial particles

particles

particles of the Medicine, being poured into the Blood, do immediately ferment with the acid particles of the Water; and moreover while they exagitate and ferment them, they raise a notable excretive fermentation in the whole mass of Blood, so that farther, when all the particles are put in motion, not only the watry and recrementitious, separated from the rest, are discharged by the Kidneys, but also the innate and active particles of the Blood it self, do extricate themselves from the grosser with which they are entangled, and at length recovering, do begin to resume their fermentative virtue, and to sanguifie.

V. Diaphoreticks often doe much good, and are usually more agreeable with this Disease confirmed, than in other kinds of Dropsies: And although at the first they be not able to cause Sweat, because the habit of the Body swims with a flood of thick humours, however, while they exagitate the Blood they rouse up its inbred active particles, that were asleep and half drowned before, dispose them to a fermentation, and moreover, put all the recrementitious and especially the watry particles into motion, so that these running immediately out of their receptacles, go off with ease and speed. But Hydroticks must be given in a little larger doze; for their quantity is very small, and their active particles are drowned in the Water, before they can be diffused in the Blood, and can begin to exert their virtues upon the Blood. Wherefore Spirits, whether Armoniack or of Wine, Tinctures also and Elixirs; yea, and Powders, are seldom used for this Disease, because in a little doze, they doe little good, and if they be given in a large doze, they, by their efferation often hurt the Bowels. But some such things must rather be made use of, which taken in a larger doze and hot, may pass into the Blood not weakened, such especially are Decoctions of Wood and Seeds, whose particles being pretty congruous to the Blood, and invincible by it, do pass through its whole mass, and exert their elastick virtue by putting all the humours in motion.

VI. Among external Administrations, whereby the Water gathered within the habit of the Body is stirred, Oil of Scorpions (so it be genuine) applied by it self or added to Liniments (made of Sulphur and divers kinds of Salts, and of Quicklime and other Minerals, which being powdered and mixt with the mucilaginous extracts of sharp Herbs may be reduced to the form of an Unguent) does oftentimes much good. I knew a Boy, who was much swelled with an universal Anasarca, and was cured by this onely Medicine: for his Mother (I know not by whose Advice) did anoint all his Body morning and evening with Oil of Scorpions, rubbing all the parts with her hot Hand very hard. Upon doing of which, within three days he began to make a great deal of Water, and when he had continued for some days so to make Water, the Swelling fell by degrees, and he recovered.

VII. Baths are scarce proper for any Dropsie but an Anasarca, and not for this neither, unless in the inclination to it, or decrease of it: Because, when the Blood is heated and incited by the ambient heat of the Bath, and moves the Waters stagnating every where, and drinking them up into it self transports them by divers ways, there is danger left (as it often happens) it receiving them out of the habit of the Body into its mass, should presently discharge them into the Brain or Precordia: for nothing is more usual than for Diseases of those parts, to wit, an Asthma or Apoplexy, to seize Hydroticks after bathing. Notwithstanding, when the conjunct cause of the Disease, that is, the intumescence, is either moderate or not great, a Bath of Water impregnated with Salts and Sulphur, or also a Stove, whereby gentle Sweat may be provoked, is often used with success.

VIII. Stoves, by heating, thinning and colliquating the subcutaneous humours, by opening the passages, and drawing out Sweat, doe good. Notwithstanding we must abstain from them, if immoderate evacuation of Blood have given occasion to this Disease; for they heat and stir the Blood, and draw out of the Veins.

IX. In an Anasarca Issues in the Legs are commended, but in the beginning of the Disease; otherwise, if the Disease be old, Fluxions and Gangrenes are easily caused. You may reckon the same of Blisters and Incisions, one of which will be enough for one Leg, which must be kept lifted up a little; for by little and little the Water runs out without any danger. Vescicatories let out the intercutal water plentifully, and sometimes too much; because such an Epispastick applied to swelled places makes too wide an out-let, which being opened, the Water that comes first out, often draws a flood out of the parts adjoining, upon which a great sinking of the Spirits follows. Moreover, the place suddenly so opened, because it is deprived of the Heat and Spirits, quickly gangrenes. Wherefore this Medicine is seldom applied to the Legs or Feet of hydropick persons, when the Heat is weak, and the Swelling big, but sometimes it is safely applied to the Thighs and Arms. Escharoticks are used with a little more safety than Vescicatories to the swelled places, because at this emissary the flux of the water is not so heady and copious at the first, but it begins moderately and proceeds by degrees to a great Current, which Nature (after she has been gradually used to it) bears the better. Moreover there is less fear of a Gangrene from an Escharotick than from a Vescatory, because in that application, the part, whose continuity is dissolved, is guarded against the dissolution of the Heart by an Eschar.

X. There remains yet another (not inferiour to, though less usual than the other) way of getting out intercutal Water by Acupuncture, which also must be very cautiously and gradually celebrated, lest a hasty and excessive flux of Water be raised. Take an ordinary Needle (such as Tailors use) and prick the Skin with it in the most cedematous place, so as the Blood may not come, and make at one time 6 or 7 little holes about an inch one from another, the Water will burst out drop by drop out of every such little hole, and so will drop out continually, till the Swelling round the prickt places do vanish: Then the next time, about 12 hours after, let 18 or 24 other such punctures be made in some other part either of the same or the other Leg, and so let such emissaries of the intercutal Water be made in this or that, one Limb or two, or more together, once or twice a-day: for by this means the hydropick matter may be discharged more plentifully and safely, than by any other outward administration: A new product whereof in the mean time if it be prevented by internal Pharmacy, the Disease will easily be cured. Moreover, in a deplorable Dropsie, Life is the best prolonged by that administration, inasmuch, that is, as, the Water being continually discharged by these external emissaries, the internal vital inundation is longer kept off.

XI. Chalybeates doe often in this Disease, as well as in the Green-sickness, a great deal of good, so that often the whole or chief scope of Cure depends on this sort of Medicine: Yet we must take notice that all such Medicines are not a-like proper in these cases; for those that are most used, that is, Sal Chalybis or Vitriolum Martis, and other things prepared with acids, and wholly despoiled of their Sulphur, doe no good, because they do not promote the ferment of the Blood, but rather on the contrary, when it is too fierce and elastick, they fix it; Yet Chalybeates of this Nature may be used for an Anasarca, and any cedematous Cachexy

Enchirid.
Med. Pract.

Epiphanius;
Ferdinandus.

Willis.

Idem.

in the habit of the Body, in which the sulphureous particles are left, and are prevalent, as especially filings and scalings of Steel reduced to Powder, also Steel melted with Sulphur and powdered. These Powders being taken, are presently dissolved by the acid Salts within our Body, whereby the sulphureous, metallick particles being set loose, and carried into the Blood, do ferment its whole mass, and raise the homogeneal particles therein, which before were asleep, and joining with them, do invigorate the Blood, and renew its fermentative or sanguifick virtue, before depressed. Wherefore we may observe, that upon using these Chalybeates but a little time, the green colour of the Face is turned into a florid countenance.

Hydrops Ascites, or, A Dropsie in the Belly.

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I. Formerly the Liver was reckoned the principal Subject of the Dropsie, the onely Instrument of venous alimentary blood, ennobled with that Prerogative by *Galen*, 5. de loc. aff. c. 7. and 2. progn. l. 1. where he also reads, that it is not always necessary, it should be essentially affected at first, the beginning of the Disease arising in it, but it may also be affected by consent with other parts: Yea, he judges no Dropsie can arise without some fault in the Liver, or without its consent and conspiracy. *Hippocrates* has named not onely the Liver, but other parts; So 2. Progn. Most Dropsies begin in the Illia or empty places, or in the Liver. By $\tau\acute{\alpha}\varsigma\ \delta\alpha\phi\acute{\nu}\tau\epsilon\varsigma$ he means Veins; by $\tau\acute{\alpha}\varsigma\ \chi\alpha\tau\alpha\iota\acute{\nu}\alpha\varsigma$, the Spleen, Mesentery and Womb. The same, 4. de Morbis, acknowledges a Dropsie from the Spleen, when the Patient draws drink out of the Stomach. The Moderns do attest, that upon opening of dead Bodies, the Liver is not affected primarily in a Dropsie. A Dropsie is often observed when the Liver is in no fault. Oftentimes the Kidneys and Mesentery are found to have an Abscess or Tumour in them, when the Liver is florid; sometimes it has been observed a little paler, because soaked in Water, but it turned florid again upon touching the Air. We are clearly against *Galen*, and as we ascribe the royal power of Sanguification to the Heart, so we do not deny that it is affected, when this operation is hurt. Yet we chiefly blame the ministry of the Bowels, which wait on the Heart; such especially is the Liver, the Colatory, Seive and Separatory of the Bile; the Spleen, of cold and dry Atoms, and the Kidneys, of the serous Atoms: While these parts are weak and do not perform their office, and the aquosities that are gathered, do not pass by the Kidneys and Bladder, stagnating in the hollow of the Abdomen, or poured into the Habit of the Body, or dissolved into Wind, do cause a Dropsie and all the sorts of it. The immediate cause is the ill tone both of the principal and ministering parts destined to Chylification and Sanguification. Chylification of the Stomach and Guts especially, if it be hurt, because the faculty is hurt, by intemperature, evil conformation or any common fault, or because of some external error. If the Sanguification of the Heart and Arteries succeed not according to desire, if the serous Water be not separated by the Lymphatics, and drawn by the Kidneys and Ureters, they stagnate in the Body, and in an Ascites are poured into the cavity of the Abdomen. The ways are not onely the Vena Porta, and the Arteries that accompany it, and the Branches that are dispersed through the Cawl and Mesentery, but the Lymphatick Vessels also; for being weary of their load, they expell the Water, which of it self affects a passage out: and they expel it by Anastomasis, Diarexis and Diapedesis: and the rarity of the Membrane of the Liver, which is open with Hydatides, often afford it a passage: Bursting of Water out of the least hole of the Liver, about the Porta Jecoris, where the Membrane is the thinnest, Ulceration and Erosion of the Kidneys, Bladder and Ureters, do all deserve the name of Dropsies. There are many mediate Causes.

II. The ordinary Cure sometimes is not proper, if, namely, the Dropsie in a hot and dry constitution be produced by heating Causes, which dissipate the innate Heat, as it usually happens in bilious and violent Fevers: for then cold Hepaticks, with Aperients, that are not very hot, are proper, such as are used in tedious Fevers. For Drink, he may take a Decoction of Cichory and Star-thistle, or of other temperate Aperients, but in a larger quantity; which, namely, may assuage thirst, temper the heat of the Liver, and may moisten it when dried. Which Doctrine (though it be established by *Avicenna*, *Trallianus*, and others; yet, because it seems a Paradox to some, and is of great moment in practice) it will not be useless to confirm it by a fa-

Gu. Rollin-
cious, Epi-
Meth. l. 2.
c. 9.

a famous Example related by *Baytista Montanus*, *conf.* 263. "I saw, saith he, at Venice, a Religious Man, hydropick of an Ascites and a Tympany, who was cured: There were with me *Papiensis*, *Eugubinus*, *Trincavella* and others: He had a Tympany with an Ascites, and a Consumption with a Hætick. We must then dry and moisten, wherefore we were at great difference. I was for having him drink much, but such things as might open, because he had abundance of obstructions: besides, I was for having him moistened, because he was in a Consumption. I ordered him *Syrupus acetosus*, with all things which provoke Urine. *Eugubinus* was not willing he should drink any thing, and he told us a story of one that was cured by dry things: *Papiensis*, to put an end to the Controversie, concluded that he might drink neither plentifully, nor yet not at all. The Debate continued till night. The Gentleman waited upon every Physician to his Boat. When *Papiensis* was there, he turned to a great Person and spake his mind freely, which he had dissembled before. If you will save this Man's life, you must follow *Montanus* his Advice". In this case Medicines of Steel, Tartar and Vitriol are proper, because they open powerfully and provoke Urine, especially mineral Waters, and vitriolate Spaws. *Avicenna* reports how a Woman was cured with Pomegranates.

Riversius.

III. *Galen*, and the rest of his Followers, who attribute all to the qualities of the Elements, say that the Dropsie arises not from the Spirits, but rather from a cold and moist intemperature of the Liver: But how aptly for a right Cure, you may guess; For let them give as hot things as they please, for the Liver, they doe no good, they increase thirst, waste strength, and feed and increase the Disease. But let them break the violence of the spirits, and open the stop passages; the Water gathered within will run out, and the Dropsie will be cured. Which practice has succeeded well with me in all: But in some, where there is a corruption of substance, or at least some suspicion of it, I dare not run this course, but do judge I must leave them to the Prognostick.

IV. It seems contrary to the Rules of Art, and to Reason, to affirm that Bleeding can be convenient in a Dropsie, which nevertheless *Hippocrates*, 11. *Epid. sect. 5.* and *lib. Acutor. n. 62.* did commend. I know many will say, that Bleeding is usually admitted of in this Disease, when it, as *Hippocrates* says, arises from Inflammation: Yet of these many, that talk thus, when there is no occasion, you will see but few either propose it, or when it is proposed admit of it, when it ought to be done, and this to the Patients great damage. But if they knew how to use this Remedy in time and in a convenient manner, the Liver, or Spleen, or both, would not be afflicted with too much or bad blood, through want or delay of bleeding, the indisposition of which parts a Dropsie does usually follow. But whether did *Galen* always omit bleeding in this Disease? He, *adversus Erasistratum*, cap. 5. de V. S. has these words, *I have often cured a Consumption and Dropsie by Blood-letting.* Therefore since an intemperature of the Spleen or Liver, whether imminent, or already conceived, uses to be greatly amended, or oftentimes removed by evacuation of blood, whether spontaneous or procured by Art, for this reason it ought not so readily and generally to be condemned, as it is by most Men, when there is some suspicion of a Dropsie, or one beginning; especially since *Hippocrates*, *l. de Affection. n. 21.* holds, that Bleeding must frequently be repeated in the Splenic Vein, when Men are troubled with the Spleen and inclined to a Dropsie. But what drew me formerly, and my Masters, and other Physicians, into this fear, I think I may lawfully tell. It was indeed an ill custome, handed from one to another: for it suffices most Men, instead of Learning

or Reason to defend themselves by common usage: And a fallacious consequence deduced from a true saying of *Galen's*, *l. 2. de natur. facult. c. 8.* and *lib. 6. aph. 12.* Cure after old Hemorrhoids, &c. and from other places, where he affirms, he has seen many made hydropick, both Men and Women, upon the suppression or diminution of the Hemorrhoids or Menstrua, or when they run too much, whereby the Liver is cooled, and its sanguifick virtue diminished: Whereby it so comes to pass, that it fares with the Liver and Veins in making and retaining of the Blood, as it does with the cooled Stomach and Guts in concocting and retaining food, when we are troubled with a diarrhoea. Hence Physicians that are not over perspicacious, being deceived by the fallacy of Similitude, infer that Blood-letting is not onely not safe, but very dangerous for such as are disposed to a Dropsie, who how badly they collect, and worse connect, the experiments of Art do most evidently testify. Since oftentimes a Dropsie takes them from whom neither any Blood was taken, nor spontaneously voided, yea them rather who had it stop by the suppression of the Hemorrhoids or Menfes: And, on the contrary, nothing is more rare, than for a Dropsie to follow simple effusions of Blood: I call them Simple, which come without any Impurity of the Blood or Fault of the Liver, as such as follow Wounds, which may be proved by many Instances of such as after a Wound and after a Crisis have lost a great deal of blood, none of whom were ever taken with a Dropsie. Therefore evacuation of Blood causes not a Dropsie, but the useless redundance or impurity of it; by one, or both of which joined the innate heat of the Liver is suffocated, or abated, or inflamed, then Nature is stimulated, and through the load and fault of that which should have been the nourishment of the Body, it endeavours to expell it as its greatest enemy by the Veins of the Nostrils, or the Anus, or the Womb. But notwithstanding, because Nature cannot always observe the stated and convenient moderation in these spontaneous openings of the Vessels, hence it comes to pass, that often after them, especially if there be any fault in the Blood or Liver, Dropsies come, as *Galen* said. Wherefore the prime and chief scope of avoiding a Dropsie imminent, or of curing one beginning or already begun, must relie on those Remedies that abate the useless quantity of Blood, and correct its impurity, and free the Liver from its intemperature (especially a hot one, to which it above all the other parts of the Body is most obnoxious) Among which Remedies all Learned men agree, and it is found by experience, that letting of Blood has the principal Prerogative. Yet farther, I suppose, the use of this Remedy proposed by several may more easily be allowed me in one imminent, or just beginning, than in a confirmed and violent Dropsie, in which nevertheless *Hippocrates*, 11. *Epid. sect. 5.* reckoned it not altogether useless, when he orders the inner Veins to be opened, when this Disease is great in intention. But when the Dropsie is confirmed already, and arises from some fault in the Liver or Spleen, as there is no hope of the Cure of this; so neither must this said Remedy be rashly exposed to calumny. Which indeed, though it may relieve a Man, just ready to be suffocated, so that Life may be prolonged a few days; yet it must not be propounded or performed, without signifying to the Patient what fruit he can expect from it, lest being bolstered up with vain hope of Cure, Men blame both the Remedy and the Adviser of it.

V. Evacuation by Vomit, because it disturbs the Belly too much, and increases shortness of Breath, is hurtfull to some; yet it may doe some Mengood, if any revulsion be made from the mesaraick Veins to the Stomach and Guts; or for the removal of the Cause, whence the store of Serum comes, especially

Leonardus
Botallus, *l.*
de curat. per
S. M. c. 25.

if they be easie to vomit; as also if through excessive thirst they have drunk abundance of Water, for the vomiting of it up again, which some give sometimes, that they may presently vomit it up again. ¶ We presently proceeded to vomit him: for he was easie to vomit: The Vomit was procured by warm Water, *Syrupus acetosus* and Oil. We often gave on purpose three pounds or thereabout of cold Water, and presently made him vomit it up again, and so there came away a green water, and at last bilious and bitter excrements. He was better after vomiting.

Epiph. Ferdinandus, Hist. 37.

VI. Hippocrates, *Aphor. 14. lib. 6.* opens the way of Cure (if Water flow out of the Veins into the Belly of Hydropicks, it cures the Disease) deduced from the imitation of Nature. But this must be observed, that it is impossible that by a weak Medicine the humour which swims below the *Peritoneum* and the Guts, should be drawn into the Guts: For they that think they can doe this with Juice of *Iris*, or *Diatarbith*, or *Soldanella*, are deceived: for these things do easily carry off the Water contained in the Veins, but not that which swims in the *Abdomen*, wherefore there is need of *Elaterium*. I mix some grains of it with *Pilule Aloephangini*, or else I give a small quantity of *Euphorbium*, mixt with some *Cassa* newly drawn. ¶ If he purge too much, give a little *Opium* with Treacle and Syrup of Citrons, for when Sweat is caused, the Purging stops.

Heurnius.

Idem.

VII. Always in giving of Purges it must be observed, that strong ones be not used too often, as *Galen, 9. Kaza rous*, shews, because they debilitate the Body, so that a greater quantity of Water gathers. Therefore Strengtheners and Openers must be oftner prescribed than Purgatives. Experience teaches, that evacuation by urine often succeeds better, than that by stool.

Riverius.

VIII. We may, according to *Seuerius*, use *Mercurius vitæ* to carry off the Water, though it be a Vomitory, if it be made fixt by long Digestion: for in Hydropicks it will not easily cause a Vomit: The reason whereof, according to him, seems, because in such abundance of Water, the solid parts cannot be so vellicated: Or, because the Salt of the *Serum* fixes the volatility of Vomitories. This is done in Gum *Gutta*, if it be mixt with Spirit of Salt or of Vitriol. ¶ I do not question but more would be saved from the Jaws of Death, if Nature were helped with a little stronger Remedies, especially Mineral ones. A Boy nine years old, having been some months hydropick after a Cachexy, was given over for desperate by others: He was ascitick with an *Anasarca*. I first of all advise Evacuation by *Mercurius dulcis* and *Diagrydium*, which being repeated once or twice, I make use of a medicated Spring in the neighbourhood, which was nitrous, and mixt with Sulphur and Vitriol, I first applied it with new Sponges; then I gave it in Drink and for a Bath: sometimes also giving a Purge made of an Infusion of Leaves of *Senna*, *Agarick*, black *Mechocacan*, Seeds of *Carthamum*, with Currants, Aniseeds, &c. in the foresaid Mineral water, by benefit whereof not onely the Belly was loosned, but store of Urine was voided, his Belly falling by little and little, so that in a few months time he was perfectly restored to health. In like manner a Girl about three years old, being puffed up with an *Anasarca* all over her Body, and utterly abhorring all Medicines, was recovered by the use of *Mercurius dulcis*, with a few grains of Magistery of Jalap, when she was at Death's door, and by giving the said Medicines several times she was plentifully purged without any trouble. ¶ The Medicines of most moment are such as are made of Antimony, as *Mercurius vitæ*, the Dose whereof at first must be 4 grains in extract of Hellebore, or *Coloquintida*: Afterwards, if the strength will bear it, it may be increased to twelve: The use of it must be continued for some days, especially in a confirmed Dropsie, and when the tone

Hæferus, Herc. Med. l. 3. c. 2.

Horstius.

of the Stomach is not spoiled; In this case it causes no Vomit, but onely purges downwards; And in old People it causes a *Procidencia ani*.

Hartmanus.

IX. I use *Elaterium*, I begin with 1 grain and an half, and afterwards I give 2, then 3, and to 5; but gradually; nor must the Dose be increased, unless the matter to be evacuated require it, and the Disease will bear it. This is the Receipt: Take of *Elaterium* 2 grains, *Pilule Aloephangini* 1 scruple. With Juice of *Orrice* make Pills. Some Hydropicks cannot take *Elaterium*, but they fall into a *Syncope*; then it must not be given them. They can neither bear Antimony, nor Juice of Spurge. Then I follow *Ætius*; I take the root of wild Cucumber; I cut it, and reduce it to Powder, I put it in generous Wine, as in Malmsey, and steep it in 12 or 14 ounces thereof for 3 days, and I give this Wine with the Powder at 3 times, for 3 days one after another: Then I intermit for 3 or 4 days, and I give it again for 3 days: I intermit again, and I give it again. And so the Swelling abates without any trouble: for this Root is corrected by the Wine, which also strengthens the Stomach and Liver.

Capivaccius.

X. Fernelius, in his *Pharmacopœia*, describes an Ointment, which applied powerfully carries off the Water in the Dropsie, and abates the Swelling of the Belly. But you cannot make tryal of this and the like, without discredit: for the purgative virtue communicated to the Muscles and Membranes, often causes a mortal loofness.

Riverius.

XI. Diureticks must not be given till the Body be purged and made fluid: for it is found by experience, that the more Diureticks and things that thin the humours are given to Hydropicks, the more they swell. The hollow of the Liver must first be cleared from aquosity by stool, before the gibbons part be cleared by urine. I have seen diuretick Potions succeed ill, in which there was *Soldanella*, when the first ways had not been taken care of before, and repletion removed. But after evacuation of the whole, they are admirable good.

XII. *Lixivia* taken inwardly are not proper for all Hydropicks promiscuously: Outwardly they are good to cleanse, resist Putrefaction, and to other ends. They are proper indeed, because by their diuretick virtue they cause urine, for making of which Hydropicks are usually famous, but not for all promiscuously: Not for such as are consummate, and make a red deep coloured urine, and not for such as have a weak Stomach. And in general, the tone of the Stomach must always be observed in these men; because it is greatly hurt by *Lixivials*, the ferment dies, which delights in an acid volatility, and they increase the Salts, which are there in great plenty already, and threaten a mortification of the Bowels.

Wedelius.

XIII. Sometimes Hydropicks do suffer a stoppage of Urine, whereby, not onely the water is increased in the Belly, but there is imminent danger of sudden death: Wherefore some potent remedy should be had in readiness, as the taking of *Cantharides* inwardly, which are most proper in an *Ascites*. Hippocrates approves of them, 4 de *vict. acut. t. 124*. But they must be given upon certain conditions, 1. If in a Dropsie (and in other cases also) the Urine be so stopt, that it will not yield to other Medicines. Therefore because there is danger of Death, we are forced to have recourse to the strongest remedies: But we must suppose, the Urine stops because of some fault in the Kidneys, which is usual in Dropsies. 2. *Cantharides* must be given whole; for we give the belly, to provoke Urine, but lest they should do mischief, we mix the wings and feet, which parts hinder them from hurting the Bladder. The conditions also must be observed, proposed by *Galen, c. 23. l. 3. simpl.* that they be given in a small quantity, and mixt with other Medicines, especially such as defend the bladder. Wherefore we may give one whole *Cantharis*, with a scruple

a scruple of Powder, either of Rue, or Spike, or some such thing: And some fat thing must be given to drink after it, as four or six ounces of Broth of a fat Chicken. In this manner they are given with benefit and safety. I have seen some, who have been given over by all, recover, by taking *Cantharides*.

Capivacci.
ut.

XIV. Any one would be apt to think, that Diuretick Medicines were good to carry off Water from any place or hole in the body. Indeed, it is apparent from experience, that they frequently cure an *Anasarca*, and doe more good therein than any other remedies. We must consider therefore, what they can doe towards the discharging of the *Abdomen*. As to this, first of all it is manifest, that no immediate passage is open from the Ascitick Pond, though near, to the Kidneys; but, what water soever is carried from the *Abdomen* thither, it must of necessity be received back into the mass of blood, and then be poured out of it into the Urinary sink. But how small a matter is it, that the mouths of the Veins, opening upon the superficies of the Bowels (if they open at all) can receive? And this is all that Diureticks can doe; they make the blood, by melting it, and driving its serosities plentifully to the Kidneys, when it is emptied, to draw the water fluctuating in the Belly, to it self. In the mean time there is no less danger, lest Diureticks given unseasonably, while they put the blood too much into fusion, should drive the Serum, forced to separate, more into the nest of the *Ascites*, than into the Kidneys, and so rather increase, than remove the flood in the Belly: for it has appeared, by frequent observation, that it usually so falls out. Wherefore, when Diureticks are prescribed for the cure of a Dropsie, we must have a great care of this contrary effect. Truly it is for this reason, that (from the authority of the Ancients, and practice found by experience) Afringents and Strengtheners are always mixt with Hydropick Medicines; not that such things confirm the tone of the Liver (as is commonly said) but they preserve the *crasis*, or mixture of the blood from being dissolved with too much fusion. Wherefore, in an *Ascites*, which comes chiefly, or partly, because the frames of the Bowels and vessels, and especially the Coats, Glands and Fibres, and the Interstices of them, are stuffed with a serous humour, and greatly swelled thereby; as Catharticks, so also Diureticks are proper, and are often taken with good success, inasmuch, that is, as by taking of them the Mass of blood (the Serum being copiously derived to the Kidneys) that is emptied, does take in, by the mouths of the Veins, the water stagnating near them, and conveys it to the Urinary passage. But on the contrary, in a mere *Ascites*, where the flood of water overflows the cavity of the Belly, when the texture of the Bowels is free from any serous obstruction, Diureticks are given either in vain, or inconveniently: inasmuch as they get nothing out of the pond of the Belly, and by often putting the blood into fusion, do force the Water, that is apt to drop in, with more impetuosity.

Willis.

XV. All Diureticks are not equally proper for an *Ascites*, and must not be given indifferently: for we may observe, that they who are troubled with this Disease, do, for the most part, make little Urine, but red and lixivial, which is a sign indeed that the *crasis* of the blood is too strict in such, from a fixt and sulphureous salt exalted and combined together, and therefore the Serum is not duely separated in the Kidneys, which yet is left about the turnings and windings of the obstructed inwards, and so discharged into the cavity of the Belly. Wherefore, in this state, only such things must be given to provoke Urine, as do so restore and amend the constitution of the blood, that the enormities of the fixt salt and sulphur being removed, the serous part may be separated, and more plentifully dis-

charged by the Kidneys: For which purpose, not acids, or lixivials, but things endued with a volatile salt are designed. For I have often observed in such Patients, when Spirit of Salt, and other acid *Stagmas* of Minerals, and when Salt of Tartar, Broom, and the *deliquia*, or dissolutions of other things have done rather hurt than good; that juice of Plantain, Brooklime, and other herbs, abounding with a volatile salt, also the expression of *Millepedes*, have done much good: for the same reason Salt Nitre highly purified, or *Crystallum Minerale* often does good.

XVI. Oftentimes the Dropsie is caused without any fault in the Liver, because of the weakness of the Kidneys, which should draw the Serum, and these passages cannot be opened by any the most generous Diureticks: Therefore we must endeavour to cleanse these parts, the neighbouring especially, and also to restore the lost faculty by Fomentations.

XVII. But while Diureticks are taking, Clysters must be given frequently, of a decoction of Mercury, *Soldanella*, Centaury, Fenil, Bayberries, with some Hydragogue Elecuary, or: *Meli refar. so.*

Fortis Conf.
62. cent. 233

XVIII. Men commonly reckon that Diureticks in a Dropsie do carry onely that matter to the Urinary Vessels, which may fall into the cavity of the Belly, and not that which is gathered there already, for it is no way possible for it to be evacuated by Urine, because if the matter residing in the cavity were to be evacuated by Urine, it must of necessity enter the *Viscera* again, which is impossible. But this fear is without ground, for they may be given with great benefit, as they are able, not onely to derive the serous matter, which is as yet contained in the vessels, and is about to run into the Belly, but also to draw back into the Veins and Lymphatick Vessels that very Water which retagnates in the cavity of the *Abdomen*. So *Rondeletius* l. 6. c. 36. l. 2. saw a Woman in a Dropsie cured by flux of Urine. But we must know, 1. That the body must be purged before, and made fluid. 2. That they have this advantage, that they can at the same time free the inwards from obstructions, of which number are Spirit of Salt, Urine, and its Volatile Salt, *Spiritus aperitivus Penoti*, *Tinctura aperitiva D. Mabil*, Salt of Wormwood coagulated with the Spirit of Salt, *Fel vitri*, with a decoction of River Crabs, &c. *Helmont* has noted a passage, *lib. de potest. Medicam. Sect. 32.* which agrees with this, *I perceived*, saith he, *that all simple Salts pass by Urine and the Guts, and in the mean time dissolve the filth in these passages, and make the expulsive faculty mindfull of its office.* 3. That they must be frequently used. 4. That they must be often changed, lest Nature accustom her self to them. 5. That they must be given in Powder. 6. That we must abstain from them in an *Anasarca* of the Veins, and colliquation of the humours.

Heimanus.

XIX. Amongst hydragogue Medicines drinking of the Waters is chief: And of all these the *Spaw* water is best, which promises certain health to Hydropicks, even confirmed; for it carries off the redundant water in the *Abdomen* by the way of Urine, and wonderfully restores lost strength to the Stomach, Liver, and to the rest of the natural parts, and so confirms it, when restored, that a Man, after taking of this water, repeated several times every day, perfectly recovers his lost health.

XX. Sudorificks are reckoned among evacuating Medicines, which, as in an *Anasarca* they always doe good, so in a Tympany, and an *Ascites*, sometimes they doe harm: If, that is, driness of the Liver, as it often does, give original to the disease; besides, for the most part it is impossible to raise a Sweat in Hydropick persons.

Riverius.

XXI. Diaphoreticks, though they be of special use in an *Anasarca*; yet in an *Ascites* they are either of none, or but very rare, because used unseasonably, they often doe the Patient a great deal of harm,

Q q 2

without

without any benefit: inasmuch namely as by heating the blood, they cause the waters fluctuating in the cavity of the Belly, to rage, and as it were to boil, so that the spirits and humours are very much disturbed by vapours raised from thence, and so a disorder of all the functions does follow, and the Inwards themselves are very much hurt, as if they were perboiled. Moreover, by Sweating thus amiss, the blood being forced into fusion and precipitation of the Serum, discharges more of it into the nest of the *Ascites*.

Willis.

XXII. Sweat must not be raised by Decoctions, which by their actual humidity doe harm, but by Claudinus. Extracts of *Guaiaicum*, *Sassafras*, *Cardus Benedictus*, &c.

XXIII. They greatly mistake, who try to expell an absolute and full Cacoehymie, as in a Dropsie, by Sudorifics: Indeed this is sometimes good in the Venereal Disease; but it is onely in this case, and that onely sometimes. It happens sometimes that in Hydropicks, little blisters appear on their Belly: by opening of these oftentimes more water comes out in two or three hours time, than the best Hofmannus. Sweat would get out in a whole night.

XXIV. Let any one be ill of an inveterate Dropsie, in the end he is troubled with continual want of Sleep; and he that goes to cure this with Narcotics, kills the Patient. Hydropicks dye upon taking one grain of *Opium*. If the Patient desire help for his want of Sleep, let the Physician prescribe some well-known Medicine, lest, when the Patient must of necessity dye, hastning of his Death be ascribed to Medicines.

Walsus.

XXV. Whoever gives an Hydropick person half a drachm of Treacle, he highly endangers his Patient's life, and his own credit, even by giving of one grain: For such Opiates do not onely lay the Spirits asleep, but they make the shortness of breath worse, to which Symptoms almost all Hydropicks are obnoxious.

Hofmannus.

XXVI. Perforation of the *Abdomen* is the greatest Remedy, which must be used, when there are indicant and permittent Intentions: The Indicant are watry Matter. It is lawfull to perforate in an *Ascites* onely. *Avicenna* does not tap the *Abdomen*, unless the body be very strong: When therefore you come to Patients, do not tarry till they grow weak, because it will be in vain afterwards to use this remedy. Concerning the time, *Avicenna* says, You must not dare to tap the Belly, as long as any other cure is possible. The Moderns explain it thus; All things must be tried before the Knife: but this is a great error: for *Avicenna* used other Remedies after Tapping. But he would shew us that we must not proceed to Tapping, unless we foresee the Disease will not be cured with less remedies. When therefore we find the Belly swell fast, and other accidents, we must presently have recourse to this remedy: But if we should try all things first, without doubt the Patient would be enfeebled, and his weakness would not allow it. ¶ We must tap Hydropicks quickly. ¶ *Aurelianus* says, there is no other reason why most dye, whatever some may object, but because this cure is always tried too late, and when the disease, by diuturnity, is become incurable.

Capivaccius.
Hippocrates.

Vallesius.

XXVII. It ought to be considered, that Nature her self, who being taught by no Man, yet does those things that are proper, has, as it were, pointed out to us this operation, while she has saved the Patient oftentimes from present death, by swelling and opening the Navel in a Dropsie: And though it be very difficult to tap the Navel, yet, when it is swelled, we must seek no other place. But if the Navel chance not to rise in a blister, some other convenient place must be sought: And that is on the left-side of the Navel, three inches below the Navel, and so many on one side of it: Yet first, as the Patient stands upright, if there be not an excessive

quantity of Serum, or as he sits or lies, when his belly is very much swelled, the place must be carefully marked with Ink. Formerly Section was made with a Penknife through the skin, muscles and *Peritoneum*, not without fear of hurting the Guts; then after Section, they put a smooth-shouldred Silver pipe into the wound, exactly fitting the hole. Which because it was very difficult, the Moderns have found out a far more convenient way, and that is, by a Pipe, having a very sharp edge at the end, which *Barbette, Chirurg.* p. 1. c. 15. describes, for by this the *Abdomen* is perforated by degrees: But as soon as it has penetrated into the hollow part, presently the water uses to run out at the holes, that are on each side of the edge, the excessive flux whereof, if we would stop, we stop the hole of the pipe with a Silver pen exactly fitting it, and when we have a mind to let it run again, we draw it out: When we have a mind often to repeat this operation, either a new hole is made, or that is opened again, which was made before. A little Lint, with an agglutinant plaster applied over it, shuts the hole securely.

Van Horne
Microscop.

XXVIII. We must hasten to tapping, not the vulgar way, which is full of danger, but a new and safe way by a Silver pin, hollow, which is gently thrust into the *Abdomen*, about four inches below the Navel, and as many on one side of it, and after a sufficient quantity of water is let out, it is drawn out again; and in like manner, at some other time or day, it is thrust into the same hole, unless it seem good to make a new hole some other where. There is no danger in this operation, because, when the pin is drawn out, no more liquor will run out; but by applying a *Diapalma* plaster, the opened place is not onely defended from the injuries of the ambient Air, but its consolidation is promoted.

Sylvius.

XXIX. Although *Erastistratus*, *Avicenna* and *Gordonius*, think it destructive, yet if there be all the conditions for the safe performance of it, I should willingly order it immediately. And these conditions are six. 1. That not deplorable persons, but such as have strength, be tapped. 2. That they be not very feverish. 3. That there be no *Schirrhus* in the bowels. 4. That the disease be new, and the bowels not corrupted by the water. 5. All the water must not be evacuated. 6. It must neither be in Summer nor in Winter time, if it be possible. But in a Dropsie of many months, the decay of the Inwards may be suspected, which alone may dehort from so great a Remedy, the unhappy success whereof may easily be ascribed to the Physician. Hence *Rhases* his Error easily appears, who thinks, we must onely use tapping in the progress of the disease, whereas then Influxions are rather convenient, which are proposed by *Avicenna*, *Albucasis* and *Celsus*.

Fortis.

XXX. Moreover, we must observe, that the Belly must not be opened with a red-hot knife; for the *Peritoneum* is inflamed, as I have experienced. ¶ Nor must it be done with a Caustick; for when a great and round Eschar is made, the water will come out at the large hole made within, with such violence, that no dam can check it. One was applied, against my mind, to the Noble Mr. *Alexander de Harpy*, a famous Lawyer in *Geneva*, the day before his death, which, but that it anticipated, he had died at the first gushing out of the water: for, when he was dead, and the penknife thrust into it, the water could scarce be stoped by applying the Thumb. When we looked on the place, to which the caustick stone had been applied, it had passed all the integuments to the *Peritoneum*, with a wide hole, and had not this by its thickness hindered (which in Hydropicks is observed to grow very thick) he had died immediately.

Panarolus.

XXXI. Concerning this operation, it must be observed, that Hydropicks must not be tapped, unless an *Exomphalos*, or a starting of the Navel appear, Nature

ture as it were affecting that way for the discharge of the water: Otherwise, all that are opened, when the Navel is not prominent, die; And this prominence of the Navel may be procured by Art, by setting dry Cupping-glasses, with much flame, to the Navel, and also by emollient and drawing fomentations, which in three days, or thereabout, cause a prominence, in which Tapping may be administered.

Formius ad
Riverium.

XXXII. Modern Practitioners say, something must be evacuated morning and evening, but this way of evacuating to me seems pernicious; for I saw the water once so let out, and the Patient died in two days: And, I think, the onely cause of his death was the taking away of so little water: For when the way was once made, the water trying to get out, rushes upon it with great violence, and lying with all its weight on the wound, does farther debilitate the part, which is debilitated with fection already. Thence, 1. There arises a great difficulty in retaining the water, which being retained by violence, endangers a Gangrene, as it happened to him I spoke of. 2. What benefit is there from so little evacuation? for in the belly of one that is perfectly Hydropick, 30 or 40 pints of water are contained, and what relief can evacuation of half a pint give? But it is my judgment, 1. That a great quantity should be taken away, about half, or at least a third part, and till the Belly fall remarkably: In the mean time, left the Patient should be weakened by the loss of so much, he must be refreshed with oil of Cloves, Cinnamon-water, &c. the next day about two or three pints must be taken away, and the third day again; but ever less and less: for because the parts have so long a time been accustomed to the water, therefore I think the last of it should be left a good while; but the first should be taken out much at once, to the end Nature may presently find manifest relief. For then especially there will not be so great difficulty in keeping the water; there will not be so great a weight of water upon the wounded and weak part; and it will not be necessary to thrust in tents and pipes so hard, with pain, or to press the wounded part so violently. And that there is not so great danger in evacuating the water at once, examples of several do shew, from whom it has burst, either of it self, or by accident, so that it has almost all run out, and yet they have recovered. Thus we heard lately here at *Lochin*, how almost all the water burst out of an ascitick Woman at once, in a very short time, and yet she recovered.

Ficinus.

Barbette.

XXXIII. In Hydropicks the coats of the *Peritoneum* grow very thick, yea, in success of time they acquire a cartilagineous hardness, which, in tapping of the *Abdomen*, is very necessary to be known.

XXXIV. They who refuse Tapping, admit of opening the *Scrotum* (but the bowels must be safe, and the strength good) which being turgid, must be opened with a Penknife or a Lancet, and afterwards must be kept open with a Seton. Sometimes a Gangrene comes, but this not always of any great moment; for so, way being made, the water runs out more easily, and such cutaneous Gangrenes are not so difficult to cure. ¶ A Black-smith, in the year 1653. afforded me an instance, in whose *Scrotum*, when it had swelled after a Dropsie, Pustules arose, and the water of the *Abdomen* ran out that way, upon which a Gangrene followed in the *Scrotum*, of which he was cured by the industry of Mr. *Sabourin*, a Chirurgeon of *Geneva*: He survived it three years, and when the Dropsie came again, through a bad Diet, he died.

Hildanus,
cent. 1. obs.
48.

XXXV. According to *Aetius*, we may sometimes prick the *Scrotum* with Needles, into which water is fallen, and experience shews, this remedy is very good. A Seton is made with a red-hot Iron, where-with the skin of the *Scrotum* is perforated. There-

fore we may either use pricking, or a Seton, according as the Patients admit of the one remedy rather than the other.

Capivaccius.

XXXVI. *Holleus* has a new way of getting out the water in Dropsies; he says, that one escaped a Dropsie, and Death it self, by cutting his Nails of his feet and hands to the quick: But with how much danger this cure is accompanied, appears from *Henric. ab Heer obs. 12.* who affirms, that an hydro-pick person, about fifty years old, when he had cut his Nails of his feet to the quick, was presently taken with a Gangrene, and not long after he died.

XXXVII. Scarification of the legs was a famous remedy among the Ancients. *H. Saxonia*, out of *Alex. Benedicti lib. 15. cur. Morb.* does commend the Scarification of the Skin on the *Abdomen*; But in the Ankles and Legs he advises to abstain from it, for fear of a Gangrene: Yet *Langius* confirms it by his own experience, and advises, to remember well the remedy of Scarifying the inner Ankle. Which experience I also found true about five years ago in a Man, who, after he had been ill of a double Tertian, with a *delirium*, afterwards fell into an *Ascites*, and when no other remedies would doe good, he rashly, of himself, ventured on this scarifying of the Legs: For Water came out thence, and he bore it very well; He is now about 70 years old, and lives well, and free from any disease.

Frid. Hofmann.

XXXVIII. In our time, at *Padua*, the water ran so abundantly out of two cuts in the Ankle, that the Woman presently died: And when blood, the fountain of heat, is subtracted, sometime a Gangrene follows.

Rhodiæ,
cent. 3. obs.
17.

XXXIX. If Medicines doe no good, Physicians use to have recourse to the remedies propounded by *Celsus* and *Aetius*, that is, to Issues in both Legs near the Ankles, by which, being kept long open, the Water, that would otherwise, by its weight, fall upon the lower parts, is, in a long time, discharged. ¶ I made Issues in the Legs of an Ascitick, below the Knee, whence an incredible quantity of yellow Water was voided, and hereby he was cured, yet not neglecting in the mean time remedies, that were able to strengthen the Bowels. He kept his Issues for many years, till they dried up of themselves, nor did he die for some years, but at length it killed him. ¶ *Hildanus* (*obs. 42. cent. 6.*) being asked, Whether Issues were proper in a Dropsie? "When, saith he, the inner parts have been a little relieved, and cured by proper remedies, an Issue may be made in both Legs, in the right Leg at least, without any danger; but besides, the internal parts will be purged by means thereof from excrementitious humours, to the great advantage of health. But because the swelling of the Legs seems suspected to the Gentleman, It will not be amiss, before the Issues be made, to bind the Legs tight, beginning at the foot, and so proceeding to the Knee: Yet before this be done, it is proper to put the Legs in a decoction made of Wormwood, Centaury, Scordium, Sage, Betony, wild Marjoram, Rosemary, Juniper-berries, and the like, with Water and Salt, and in the evening especially, when he goes to bed. But in the Day-time, especially when he goes abroad, and exposes himself to the open Air, it is best to apply dry things. Hitherto *Hildanus*."

Mercutialis.

Glandorp.

XL. Scarification, according to *Aesclepius* his judgment, is propounded onely about the calves of the Legs, near the Ankles; yet he orders it to be deep, that all the water may conveniently be evacuated by degrees. But *Leonides*, as *Aetius* relates, is of the same mind with *Hippocrates*, and approves of Scarification, not onely about the calves of the Legs, but also about the Thighs, *Scrotum* and the Arms. *Alexander Benedictus*, to whom others also adhere, commends these Scarifications upon the Belly, under the

the Navel, in the same place, where Tapping is performed. It is confirmed by manifold experience, that these Scarifications do wonderfully help Hydropicks, and the water is got out without loss of strength. But as Scarifications of the *Abdomen* and *Scrotum* may be celebrated without danger, so Scarifications of the Belly and Thighs, in a great oedematous swelling and violent cooling of the innate heat are dangerous, and easily turn to a Gangrene. It is therefore my advice, when the heat is very languid, to abstain from them.

Saxonia.

XXI. Some advise the applying of Blisters to the inside of the Ankles: But it is safest to abstain: 1. Because little moisture is discharged. 2. Patients usually complain of Pain about these parts. 3. The Sores cannot be healed up, before a perfect Cure, since the Ulcers of Hydropicks, 6. aph. 3. are incurable. 4. There is great danger of a Gangrene. *Hildanus*, cent. 1. obs. 48. relates a history of a Gangrene arising upon the use of Blisters. *Platerus* has also observed that one can scarce be prevented, when Blisters arise of themselves. *Septalius* rejects them. *C. Piso*, de Morbis à colluvie serosa, found the event of them fatal. *Hildanus*, cent. 6. obs. 43. advises them.

XXII. I have found by long experience, that Infusions or Decoctions made in Wines do operate safer and better than any other forms of Medicines, and that a Dropsie, if it be possible to be cured, is best cured with them.

Platerus.

XXIII. Clysters for Dropsies must have no Oil in them, or only a very little Oil of Rue.

Rondeletius.

XLIV. *Camerarius*, a Lawyer, lay ill of a dangerous Dropsie; He begged of *Packischius* his Physician, to let him have some Herrings; *Packischius* consented, but on this condition; that he should take no potent matter for the space of two hours after he had eaten them; The Patient obeys; And what then? He at length had occasion to make water, and made such a quantity, that he continued making it for almost a quarter of an hour, and his Belly began sensibly to fall more and more. *D. Bucetius* also confessed, that he cured three People of Dropsies by the continued use of Herrings only for several days and weeks, and ordering little drink.

Sennertus.

XLV. A Boy 12 years old, hectic, ascitic and leprous, laboured of a putrid Fever, he was under the care of no ordinary Physician: But when his Medicines would do no good, I am called. We could scarce tell where to begin. Besides, he had a Pain in his Liver. It was our Advice, that he should eat bread made of Spelt with water of Ashes, some Fenil-feed and half Wheat-flower. The way of Cure was Juice of Cichory with Powder of Madder and Spike. He came to that pass, that he made 10 or 12 pounds of Urine in a day, and so he was cured.

Cardanus.

XLVI. Remedies that are used with most benefit near the places affected are Clysters and Plasters. The first do, without the fusion of the whole mass of blood (which strong Purges do raise) draw the Serum out of the vessels and glands of the Guts and Mesentery, which being thereby emptied, do a little imbibe the extravasated Lympha. To this purpose the following Clyster is very good, inasmuch namely as it both vellicates the intestinal fibres, and draws the Serum imbibed by the blood, or contained in it before, towards the Kidneys. Take of the Urine of a healthy Man, that drinks Wine, 1 pound, Venice Turpentine mixt with the Yolk of an Egg 1 ounce and an half, Sal. Prunelle 1 drachm and an half. Make a Clyster. Let it be repeated every day. Plasters sometimes do good in an *Ascites*; Yet they must be such as by their restraining and strengthening virtue, do strengthen and bind the mouths of the vessels, that they may not spue out the serosities too much. For this purpose, I often use to apply *Emplastrum Diasapenis* with good success to a swollen Belly.

Willis.

XLVII. In the use of Topicks, which are applied to the Belly, we must have a care of the Region of the Liver; for oftentimes they are very hot, and the Liver would be overheated by them, and weakened; But that they may do no hurt, the Region of the Liver must be guarded with some Unguent, as *Santalinum*, &c.

Chalmers.

XLVIII. The bruised flesh of Earth-snails, applied to the Belly is very good, with which *Dioscorides* advises to mix the Shells: Which that it may more conveniently be done, they must be reduced to powder first; and it may easily be done, for they are very brittle. But if we would mix the Shells with them, as some advise, it is best first to reduce them to Ashes, because they are not so easily powdered. The Slime of Snails also is good.

Platerus.

XLIX. *Michael Sterpinus*, a famous Chymist, cured the Dropsie which was much swelled, by making a hole in the skin of one Foot, and applying a Seton; for all the water ran and dropt out at it, as by an Alembick. *Erastus* got first of all three long Incisions made in the sole of the Foot, that the water might run out; which being done, the Swelling of the Belly fell, and then he used his hydragogue wines. Others make long Scarifications, although these ways do not want danger. I have found nothing safer, than to apply Escharoticks to the calves of the Legs, and while the water runs out, to provide for a weak Liver. For so I have cured several of a Dropsie.

Reusnerus, obs. 88.

L. I have observed, it is in vain to give Medicines for a Dropsie, which arises from an Ague, while the Ague lasts. For you will find the Ague by this means firmer rooted in, and the Dropsie not removed. We must tarry therefore till the Ague be gone, and then we must make haste to undertake the business.

Sydenham.

Hydrops Tympanitis, or, A Tympany.

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I. A Gross Wind is the cause of this Dropsie, to the generation of which two things are required: First, Gross Matter, and indeed usually black Choler: For since they that have black Choler under the bottom of their Stomach, abound with wind, and sometimes belch much, (yea, oftentimes the greatest share of their Food is turned into wind) if the wind be detained, it distends the Belly, and may make this sort of Dropsie. Nor must the cause of it be sought in the Liver only, but oftentimes in the first ways, according to *Aphor.* 4. 11. Secondly, an Efficient, which is reckoned a weak heat: but it is not simply such, but only in respect to the matter, which it is not able to conquer and disperse: Yea, oftentimes it is preternatural and great enough, and acts suddenly and violently upon all the matter, and disturbs it, this I reckon is what is usually done in a Tympany. For if the heat were truly weak, it would not act on the matter, nor would wind be bred. And so an *Ascites* and a Tympany differ in respect of their matter and the efficient: For the matter in a Tympany is more melancholic, and the heat is roasting and burning. Wherefore also sometimes we must have recourse to cooling Medicines. And *Mercatus* writes, If all these Remedies (that is, hot things) do no good

good, we must use *Hippocrates* his Advice and Prudence, who when he had for several days used hot things in these Pains, and found no benefit thereby, he passed to cold things with great benefit.

Sennertus.

Hartmannus.

II. Purges are so far from doing any good in a Tympany, that they rather exasperate it: But Purgatives, especially Mercurial ones, do often remove that which is joined with an *Ascites*. ¶ Almost the whole intention of Cure is directed against wind, by evacuating the matter, whence the wind arises. Wherefore Purges are usually prescribed on purpose, against the humour most suspected with great confidence, though usually with very little, or with bad success. For this Disease (as it appears from my observation) uses almost always to be exasperated by Purgers, especially strong ones, and seldom or never relieved: The reason whereof is sufficiently evident, because when the nervous Fibres are irritated by a sharp Medicine, the animal spirits re-iterate their irregular excursions, and still increase more and more rather than abate: Wherefore although frequent and large watry and windy stools be procured thereby, yet the Belly swells more. But though Medicine be so little able to do good in this Disease, yet it must not (as if it did nothing, or only harm) be wholly neglected, but we should leave no Stone unturned, some way or other to help the Patient, that at length a Cure, or at least an Alleviation may be obtained. Therefore though strong Purges always do harm, and gentle ones are scarce ever able to carry off the conjunct Cause: yet these latter, because they a little abate the matter of the Disease, and make way for other Medicines to exert their energies more freely, ought to have their place in medical practice; that is, once in 6 or 8 days; and at other times Clysters. (the use whereof is much more excellent) may be given frequently.

Willis.

III. When the humours are evacuated, and the strength refreshed, we must endeavour what we can to discuss wind, which the following Decoction will wonderfully perform. Take of *Album Græcum*, whole Barley, each 1 ounce and an half; boil them on a gentle fire in 3 or 4 pounds of French-wine, till the Barley bursts. Then boil the Colature defæcated by residence to half, then clarify and aromatize it with a sufficient quantity of Cinnamon, and sweeten it with Sugar. The Dose five drachms thrice a day on an empty Stomach, and he will break wind wonderfully, and the Belly will fall by degrees. But we must use these things moderately, otherwise they will hurt most grievously. A certain Woman, miserably afflicted with a Tympany, committed her self to a Physician for cure. He being intent upon the discussing of wind only, gave her some very hot Electuary, without giving her any other Medicine before: She, a little after, found the rumbling of the wind greater, and her gripes more troublesome, she breathed with more difficulty, and the old swelling of her Belly remaining, a new one grew, which elevating it self from the *Cartilago Enniformis*, where the first terminated, did wonderfully distend the whole Breast; and the tumours were parted with a pit between. She died the third day after I was called. I reckon the cause of the new tumour was the heating and evacuating virtue of the Medicine.

Ficinus.

IV. Great things are expected from Topicks, because they are applied to the Disease more immediately, and by contact, and because they dissolve or discuss tumours in other parts very well. Yet not all Dissolvents, not indeed such as do most good in other tumours, are proper here: For hot things, which are held for Discutients, whether they be used in Fomentation, Liniment, Cataplasim or Plaster, do often more harm than good in a Tympany, for they open and dilate the ducts of the Fibres, so that they lye more open to the incursions of spirits, and they also raise the impacted par-

ticles, so that when they possess a larger space; the inflation and swelling are increased. ¶ While Medicines are taken inwardly, Topicks also and external applications must be carefully applied, not hot and discutient ones, but things endued with particles of a volatile Salt, and nitrous ones, which namely destroy the combinations of other Salts, and dissolve the impositions of the spirits, to which end we propound the things following. If fomentations may be used at all, they must not be applied too hot. Beside, they must not be made of things, we call carminative, but especially of Salts and Minerals. *Cabrolus* (as *Helmont* relates) tells how he cured a Man of fourcore, whose Belly he fomented twice a day with a *Lixivium* in which Salt, Alum and Sulphur had been boiled; and then he used Cow's-dung for a Cataplasim.

Idem.

V. Wind detained in the Guts and Stomach, and not yet got into the space of the *Abdomen*, does not only breed Colick pains, but if it be so enclosed, that, no passage being open, it lift them up so high, that the whole Belly appears distended thereby, a certain sort of Tympany may arise from thence, and may be more frequent, than that which Men commonly take to come of wind burst out into the Belly. As in those who have been thought to be tympanitick, we could find no wind to burst out of the hollow of the Belly, when cut, nor the Belly subside, but the Guts, especially the smaller, have started out so turgid with wind and twisted, that they could not be thrust back again into the Belly. There is the same cause of this Tympany as of another.

Platerus;
Tom. 3. c. 2.

VI. When all will do nothing, and the wind cannot be conquered by Medicines, it would be convenient to perforate the *Abdomen* it self, with a hollow silver Pin, to its cavity, made by the *Peritonæum*, and to make way for the wind with that hollow instrument, or to get it out with some more proper instrument.

Sylvius.

Dr. Sydenham's Method of curing the Dropsie.

THE true and genuine curative Indications must either be directed to the evacuation of the water contained in the Belly and other parts, or to the strengthening of the blood, that a new product of it may be prevented. As to evacuation of the *Serum*, it concerns us diligently to observe, that those Catharticks which work either too much or too little, do more harm than good: for there is not one purgative Medicine that is not an enemy to Nature, and in that very respect wherein they purge, they in some measure debilitate and hurt the blood; Wherefore, except they pass and be expelled the body quickly, while they disturb the filth, which they cannot carry off, and put the blood into a tumult, they increase the Swelling more. Whenever therefore Hydragogues must be used, we must have a carefull regard to the facility or difficulty, with which the Patient's body is used to bear purging: Which can no way be more certainly known, than by diligent enquiry, how Purges taken at other times have wrought. For since in bodies there is found a certain Idiosyncrasy as to the ease or difficult operation of Catharticks, he will often endanger his Patient's life, who makes the sensible temperament of the body his measure and rule: When it often happens that they who are of an Athletick habit of body are easily wrought upon by gentle Catharticks, whereas, they that are of the contrary habit, are scarce wrought upon by the strongest. Now, because a Dropsie, as I said before, does above all other Diseases require a strong and quick Purge; and since in this Disease purging by

Emmons,

omnigenis, or by little and little, which does good in some other Diseases, must by no means be admitted (since this sort of purging does not lessen, but increase the Swelling.) For this reason, I say, a Purge a little too strong is to be preferred before one that is too weak, especially since we want not *Laudanum*, which gives a most certain and sudden check to a *Hypercatharsis*, or Over-purging. Besides, this must be diligently observed in all Catharticks proper for Hydropicks, that the water must be carried off with as great celerity as the Patient's strength will bear; that is, he must be purged every day: unless by reason of the weakness of his body or the too violent operation of a preceding Purge one day or two may pass between: for if purging be not repeated but at long intervals, how large soever the evacuation have been before, we shall give occasion to the breeding of water anew in great quantity. There is danger also left the water, by long tarrying in the Bowels, infect them with putrefaction. And moreover, which ought not to be slighted, the water put in motion by the preceding Catharticks, is more propense to do mischief, than when it lay quiet. For this reason therefore as well as for others before mentioned, we must quickly satisfy this intention, which respects the serous matter shut up within, nor must we desist from it, unless on urgent necessity, till the whole flood of water be drawn out. This moreover must be observed, that since it appears from practice, that almost all hydragogues, out of a particular *genus* they have, if they be given alone, do not answer our ends in such as are hard to be wrought upon; and a larger dose of them does not so much purge as disturb the blood (whereby the Swelling, which ought to have been abated, is increased.) These therefore have no other use in such bodies, than to quicken gentle Purges, notwithstanding which, in such as are easy to be wrought upon, these hydragogues work quickly and with great effect. Wherefore in such as are easy to be wrought upon, Syrup of Buckthorn-berry, even alone, purges water plentifully. Which Medicine indeed in such Persons, purges water only, and that in great quantity, neither disturbing the blood, nor making the urine higher coloured, as other Purges do. This Syrup has onely this inconvenience, that in the working it causes great thirst. But if it be given to others, who are hard to be wrought on, in a great dose, neither many stools will follow, nor those so full of water as they ought. Indeed I well remember (when I was first called to cure a Dropsie) that about 27 years ago I was called to a pious, good Woman, one Mrs. Saltmarsh, who lived at Westminster, whose Belly was swelled with the Dropsie to an incredible bigness, than which I never saw a more grievous one. I gave her, as the custome was then, an ounce of this Syrup before dinner. It is scarce to be believed what a power of water she voided by stool, and that without any disturbance, without any loss of strength to the Patient. Which encouraged me to give her it every day, unless that now and then I omitted a day or two, when she appeared any thing weak, and so the water being got out by degrees, her Belly fell, and she perfectly recovered. I, like a confident, unexperienced young Man, thought I had got a Medicine, wherewith I could cure all Dropsies: but I was convinced of my error within a few weeks. For when I was called to prescribe Physick to another Woman who was ill of the same Disease, which followed a tedious Quartan-Agüe, I gave her the same Syrup; by which often repeated, and the Dose gradually increased, I irritated the Disease; but when I had tried to evacuate the water to no purpose, no purging following, but the swelling of her Belly rather increasing, she left me off, and, as I remember, recovered her health by the help of another Phy-

cian, who used more effectual Remedies. When therefore it is manifest that the Patient is of such a habit of Body, that gentle Catharticks do their work neither quickly nor kindly, stronger things must be tried. In which case it must be observed, that though few Hydragogues, if they be given alone, answer expectation, yet if they be mixt with gentle things, as a quickner, they are very effectual. In such Bodies, for example sake, I have often prescribed the following Potion with success. Take of Tamarinds half an ounce, Leaves of *Senna* 2 drachms, Rheubarb 1 drachm and an half. Boil them in a sufficient quantity of Spring-water to 3 ounces. In the Colature dissolve of Manna and Syrup of Roses solutive each 1 ounce, Syrup of Buckthorn half an ounce, Electuary of Juice of Roses 2 drachms. Mix them. Make a Potion. Which Potion nevertheless must not be given but to the stronger sort, which purges, when other things are able to do no good: as I have tried by manifold experience of it. Here follows another Receipt not infrequent with me, which they may very conveniently use, who hate the repeated use of other Purgatives; when in purging it both heats the Patient, and strengthens him; For Example; Take of root of Jalap bruised, Hermodactyls, each half an ounce; crude Scammony 3 drachms, Leaves of *Senna* 2 ounces, scraped Liquorice, Aniseed, Caraway, each half an ounce; Tops of Wormwood, Leaves of Sage, each 1 handfull. Infuse them cold in four pounds of common *Aqua vite*, and strain it onely at the time of use. Let him take one spoonfull at the hour of sleep, and two the next morning, increasing or diminishing the Dose according to the operation. But the two chief Medicines, in my opinion, are behind; and for such as are hard to be wrought upon, they are stronger than any of the rest, that I have either enumerated, or yet found. I mean *Elaterium* and an Infusion of *Crocus metallorum*. *Elaterium*, or the *Fæcula* of wild Cucumber, does in a very little quantity exert its virtue powerfully in purging the Belly and discharging the excrements with the serous and watry humours, so that two grains, to speak in general, is a proper Dose for most Bodies. I use to mix half a scruple of *Pilular. Coch. maj.* which I order to be made into two little Pills, and to be taken in the morning. As for the Infusion of *Crocus metallorum*, an ounce and an half of it (or for those that are hard to purge, two ounces) given in the morning and repeated every day according to the Patient's strength, although at first bluish it promise little more, than to carry off the filth lodged in the Stomach, yet it will so work, that at length it will ease the Belly of its load of superincumbent water. For besides, that when the Vomiting ceases, it purges downwards, it is altogether necessary, that since there is so great an agitation and concussion of the Stomach and Bowels, after so notable a corrivation of water, wherewith they are as it were every way surrounded, an evacuation of it by passages not open enough according to the common Law of Nature, must follow so violent a straining. Nevertheless, if the foresaid Vomitory do not sufficiently purge the lower Belly, I sometimes, though very seldom, add, both Electuary of Juice of Roses and Syrup of Buckthorn, after the third or fourth Dose of a mere Infusion of *Crocus metallorum*; for example; Take of *Carduus benedictus* water 3 ounces, Infusion of *Crocus metallorum* 1 ounce and an half, Syrup of Buckthorn half an ounce, Electuary of Juice of Roses 2 drachms. Mix them. Make a Potion. There is also another common simple Medicine, which cures the Dropsie the same way as that whereof we have last treated, namely, 3 handfulls of the inner rind of Elder scraped from the Wood, boiled in 2 pounds of Milk and Water mixt together, to 1 pound. Let one half of this Decoction be taken in the morning, and the other in the evening every day, till the

the Patient be well. This Medicine both vomits and purges like *Crocus metallorum*, and therefore cures the Disease the same way, and not by any specifick virtue. Wherefore if it perform neither of these operations, or but moderately and sparingly, it does not one jot of good; but when it produces either of them effectually, especially if both of them, it conduces wonderfully to the Cure of this Disease. But indeed, which ought seriously to be taken notice of, it often happens, that water falls not onely into the Legs and Thighs, but also into the cavity of the *Abdomen*, which nevertheless must not be got out by Medicines, either purging upwards or downwards. For example, when such a Swelling either follows a tedious Consumption, or arises from some decay or putrefaction of the Inwards, or from the tone of the blood, If I may so say, being relaxed or destroyed, and from the spirits being utterly exhausted by some old *Fistula's* in the carnos parts, which have voided much *Sanies*, or from too great debility and evacuation as well of the humours as spirits, which has been brought upon a Man, either by salivation, sweating, or too violent purging, and a thin diet in the Cure of the Venereal Disease, used more than the case required. In these and other Diseases which come in this manner, the Patient will not onely not be relieved by purging, but the tone of the blood being still farther decayed, the Disease will be increased. Wherefore, the case standing thus, the whole stress of the Cure rests upon the blood and Inwards being strengthened by all means. Among other things of this nature, besides strengthening things to be reckoned up hereafter, I am informed by certain experience, that change of the Air, and Exercise in a free Air, such as the Patient can bear, does very fitly answer this Indication; the spirits, that is, being inspired, as it were, with a new life, by these means, and the excretory Organs minded again of the office incumbent on them. Sometimes also without any such cause, we must satisfy this Intention, which respects evacuating the water, neither with Catharticks nor Emeticks: for whenever the Patient is of a weakly constitution, or a Woman very subject to vapours and ataxies of the animal spirits; it cannot be, that the business can be done by Catharticks, much less by Emeticks. Here therefore the evacuation of the water must be committed to Diureticks. Of which rank, though very many be of great fame in the Writings of Physicians; yet the most effectual are they (not to say onely they) as I think, which are made of Lixivial Salts: Nor makes it any matter, of what sort of Vegetables the Athes are made. But seeing scarce any one Vegetable is more easie to be had than Broom, and it is well accounted of in this Disease, I usually order 1 pound of its Athes to be infused in 4 pounds of Rhenish-wine cold, adding a pugil or two of Leaves of common Wormwood. I order 4 ounces of the Liqueur, strained by filtration, to be constantly drunk by the Patient, in the morning, at five in the afternoon, and at night. By which Remedy alone I have seen Dropsies cured which have been reckoned desperate, in such whose Constitution has been too weak to bear purging.

But when the water (that we may hasten to the second Intention) which is the proximate cause of the Disease is now wholly evacuated, we are come for the most part but half way of the Cure, unless the weakened blood, which was the first original of the Disease, be helped by long and constant taking of heating and strengthening Medicines, whereby a new product of water may be prevented: For though it may so happen to young People oftentimes, that when the water is well purged out, they recover without any other Remedy, because their natural heat, being then rid of the load and pressure of the water, may supply the place of

the said Remedies; yet in elder People, or them that have no very sound habit of body, it is altogether necessary, that presently, when the evacuation of the water is finished, they have recourse to the use of those Simples that heat and invigorate the blood. Among which, those things I have formerly recommended in the Cure of the Gout, whether they respect the Remedies themselves, or the six non-natural things, besides those, which shall afterwards be spoken of, are proper (unless that Wine, from which we must wholly abstain in the Gout, does not onely no harm in the Dropsie, but a great deal of good, if it be used for Mens ordinary drink) seeing these two Diseases agree in this, that the same strengthening Medicines oppose the original cause of either of them. Moreover to satisfy this intention, of which we are now treating, namely, the strengthening of the blood, whether the evacuation of the water be procured, as before, by a Diuretick, a Purge, or a Vomit, it is altogether necessary that the Patient, as much as the case requires, be obliged to drink Wine, while he is under Cure (so he begin not to drink Wine, before the passages be a little opened, and way made for the water) or at least strong Beer instead of Wine; seeing all thin and cooling Liqueurs, how pleasant soever they be to the Palate, which is ever in a manner thirsty in this Disease, do make the Patient more phlegmatick and augment the water: these therefore must seldom or never be allowed. And on the contrary, generous Liqueurs, so they be not distilled spirits, promote health so far, that sometimes they alone restore it when lost; as in the beginning of the Disease, before the Belly be much stretched with water; especially if they be impregnated with heating and strengthening Herbs. For the poorer sort, whose Purse will not afford better Medicines, strong Beer, in which a sufficient quantity of root of Horseradish, Leaves of common Wormwood, garden Scurgrass, lesser Centaury, and tops of Broom have been steeped, is by my Advice used for their ordinary drink, and may serve instead of all. For the richer sort, *Canary* Wine may be impregnated with the same bitter Herbs, a draught of which may be taken twice or thrice a-day among the forementioned Medicines. Or if this please not the Palate so well, Wormwood-wine may be drunk in its stead, of which the Patient may take nine spoonfulls after taking two drachms of the digestive Electuary (described *Tit. de Arthritis*, Book I.) at Medicinal hours, that is, morning, four in the afternoon, and night. This Electuary far surpasses any other strengthening Medicine, in satisfying this Intention. But here it is of great moment, that the Patient drink sparingly of any small Liqueurs; seeing all of them, whatever they be, give increase to the water; so that wholly abstaining from drink has cured some: And therefore, if the Patient must sometimes be indulged these Liqueurs, he must drink them very sparingly. Notwithstanding, because this Disease is accompanied with great thirst, which abstaining from small drink does increase, it will be proper for the Patient to wash his mouth often with cold water, sharpened with spirit of Vitriol, or let him keep some Tamarinds in his mouth, or chew Lemon, but swallow neither of them, because of their Coldness, which is not so proper for the Disease. But among strengtheners Steel in the Cure of a Dropsie beginning deserves not the last place; for it invigorates and heats the blood. Which is the reason why Garlick is so good in this case; for I have known a Dropsie cured with it onely, omitting Evacuators, by other Mens Prescription, not mine. For it must be observed, that the Dropsie, which has onely swelled the Feet, or the Belly also, but moderately, does not presently require a Cure by Emeticks and Catharticks; but often gives way to these said heating and strengthening Liqueurs.

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But above all things it must be seriously observed, that whenever we set upon this Disease onely with strengthners, or Lixivials also, the Patient must by no means be purged, either with a gentle or strong Purge, so long as we are endeavouring to strengthen the Blood. For a Purge will pull down what a strengthner has built up; which every one must be forced to acknowledge, who has observed, that the Swelling, which by the use of strengthners began to abate, does presently increase after Purging. For although, when we desire to satisfy the intention of getting out the Water, it would not be amiss also now and then to give strengthners; yet when our whole business is to strengthen the blood, it is altogether necessary to abstain from Catharticks. It is to be observed also, that the Patient is not always cured, though we satisfy both Indications, that is, though the water gathered in the Belly be wholly got out, and Heaters and Strengthners also be given afterwards, to prevent a new product of Water. For it often happens, that an *Astiter*, which has lasted many years, by the long incubation of the Water upon the Inwards, has perverted, and as it were perboiled their substance: And has utterly corrupted both the Bowels themselves, and the neighbouring parts, breeding preternatural Glands, and Bladders turgid with *Sanies*, and turning all things, contained within the cavity of the *Abdomen*, into a kind of putrilage; as Dissolution of Bodies of such as have died of an inveterate Dropsie, has made manifest. When the Disease is arrived at this height, it contemns all the helps of Art, as far as I see. Nevertheless, it is the Physicians duty, since he cannot certainly know what harm is done to the Inwards as yet; to endeavour the cure by all means, by Evacuating, as well as Strengthening Medicines: And he must neither be discouraged, nor must he discourage his Patient. We must endeavour to doe this, for this reason especially, because in many Diseases, when the matter of them is discharged, Nature, who watches and provides for our good day and night, does wonderfully endeavour of her self to guard and defend the Patient from the pernicious relics of this disease. Wherefore, every *Astiter*, how inveterate soever, and how much mischief soever it hath done to the Bowels, must be treated in no other manner, than as if it were just begun. (*What he says of External Remedies, you have more at large in other Authors, passages out of whom you may read before.*)

Sydenham.
Traité de Hy-
drope.

Medicines especially made use of by eminent Physicians.

- Aetius.** 1. A Spoonfull of burnt Cow's-dung taken in a pint of Wine every day, is very good.
- Claudianus.** 2. A Toad split, and applied to the Kidneys of one in a Dropsie, wonderfully voids the Water by Urine. ¶ One Man insensibly waits the Water of Hydropicks by a secret remedy, by applying the Stone of a Water-Snake to the Belly.
- Benedictus.** 3. The flesh of a dried Hedge-hog does peculiarly help this disease, if it be beaten and drunk in old Wine; 2 drachms of it must be taken every day.
4. A Woman was cured with this decoction onely, called *Syrupus S. Ambrosii*. It is made thus. Take of Millet excocticated 2 drachms, Spring-water 2 pounds, Boil them till onely 3 ounces remain. Strain it. Put as much White-wine to it. Give it hot to one in a Dropsie. She was well recovered, and she sweat plentifully, and she took it 8 days.
- Crato.** 5. I have experienced, that the juice of *Iris*, crude, not boiled, cures any Dropsie, which is curable by humane help.
- Gordonius.** 6. Mullen is a specifick herb for a Tympany, 1 scruple whereof, with a decoction of Seed and Root of Fenil expells Wind egregiously.
- Cremon.**

Hypercatharsis, or over-purging.

Its prevention and Cure.

A Hypercatharsis comes, when the Purgative being disproportionate in quality or quantity, works more violently or longer than it should, both as by too much irritating the nervous fibres, it drives the animal spirits into exandescencies, not easily appeased, and as it in a manner melts the blood and humours, so that what is separated from them, being discharged into the cavity of the bowels, makes the excretory irritations yet greater. The therapeutick method respects both the prevention and cure; as to the first (before Physick) there is need of great consideration, and care in the operation of it, and after it: For first of all, we must well consider, both the constitution of the body to be purged, the strength and custome, and the nature of the Medicine to be given, its dose, manner of operation, and the ordinary effects; then comparing things together, we must proportionate the virtue of the agent according to the tolerance of the Patient. 2. While the Physick works, the parts for concoction, the blood and animal spirits, must be kept free from any other perturbation. Wherefore, at this time, neither gross, viscous, nor much food, which molests the Stomach, must be given. The meeting with the external Cold, whereby the pores of the body may be stoppt, must carefully be avoided; finally, the mind must be kept quiet and serene, void of care and of severer studies. 3. When the Physick has done working, both the exandescence of the animal spirits, and the effervescence of the blood and humours must be quieted, to which ends an Anodyne Medicine, or a gentle Hypnotick must be given; but if omitting, or notwithstanding this care, a Hypercatharsis follow Purging, the Patient must presently be put in bed, and be thus treated. First of all, let a Plaster of Treacle, or a fomentation with Flanel, dipt in a decoction of Wormwood, Mint and Spices hot, and wrung out, be applied to the region of the Stomach, and the whole *Epigastrium*: Then let him presently either take a *Bolus* of *Theriaca Andromachi*, or a solution of it made in Cinnamon water: Then a little Burnt-wine, diluted with Mint water, must be given frequently by spoonfulls. If Gripping be troublesome, a Clyster may be given of warm Milk, with Treacle dissolved therein: In the mean time warm Frictions, and sometimes Ligatures, must be used to the external Limbs, whereby the blood may be called outwards, and be kept from too great colligation, and effusion, into the cavity of the Bowels. Then in the evening, if the strength be good, and the Pulse strong enough, a dose either of *Diascordium*, or liquid *Laudanum*, may be taken in some proper Vehicle.

Willis.

Hypochondriaca Affectio, or, The Hypochondriack Disease.

(See Melancholia, BOOK XI.)

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Medicines.

I. Seeing the humours, the cause of the Disease, lodge in the branches of the *Porta*, if they could be opened in the same manner, as the branches of the *Cava* may be any where, the vitious humours might be conveniently evacuated by them together with the blood: But there is no such convenience, nor does any branch of the *Porta* reach to the extreme parts of the body, except the hæmorrhoidal branch, which reaches to the *Intestinum rectum*. Therefore if this be opened, it cures this disease most happily, because it evacuates the vitious humours gathered in the branches of the *Porta*: But this scarce ever happens successfully, unless Nature opens these hæmorrhoids of her own accord, or thrust out the humours thither, and be accustomed to evacuate the vitious humours that way. For if this should not be done, but the external hæmorrhoids should be opened by Art, then that which *Riolanus* takes notice of, happens, and the blood that offends in the *Porta* is not evacuated, but the good blood out of the *Cava*, which offends not. And the internal Hæmorrhoids, if it can conveniently be done, may be opened even in those, in whom they

never ran nor swelled, that the vitious humours latent thereabout, may be evacuated by them, and that Nature may accustom her self to evacuate the vitious blood this way, which oftentimes, even of her own accord, uses to evacuate the vitious humours, gathered in the branches of the *Porta*, to the Patient's great benefit. But though we acknowledge the difference of the Hæmorrhoid veins, laid down by the most learned Men, that is, that the Internal arise from the *Porta*, and the External from the *Cava*; And though we admit also, that they cannot conveniently be opened, for evacuating of the melancholick humour, except they be opened spontaneously by Nature; yet we think, that even by the External hæmorrhoids, black, and other bad humours may be evacuated, which are gathered about the Spleen and Liver. For since the Ancients were not ignorant of these veins, as having them obvious before their Eyes, and having often burnt them, and in the mean time they affirm, that the feculent matter of the Liver, black Choler, is evacuated by the Hæmorrhoids, that the Hæmorrhoids are the best remedy for melancholy, and good for them that are troubled with black Choler, that they cure a hardened Spleen; hence it easily appears, that Experience taught them, that black, and other bad humours, gathered about the Spleen and Liver, in the branches of the *vena porta*, are evacuated by them. And that it is so, every one that pleases may observe daily in his practice: For if he inquire into them, that find benefit by the Hæmorrhoids, he will find they are all Hypochondriack. If moreover it be inquired, whether Hæmorrhoids run, the Internal or External? He will understand that in most the external do run, and do also benefit Hypochondriack Patients; but that the Internal are seldom opened, and therefore that not onely a *Plethora*, but also a *Cacoehymie* and vitious humours are evacuated by them. And although sometimes also some thin humours, and red blood seem to be evacuated by them, yet it is not pure, but serous and salt, and an *Ichor* also runs without any blood. But not onely gross and black humours are gathered in the branches of the *Porta*, but also oftentimes serous and salt ones. And although the Internal and External Hæmorrhoids have their rise from different Veins, yet because they are inserted into the same *Intestinum rectum*, that there is some communication of these Vessels, and that their mouths meet one another, and that vitious humours are communicated from the Internal to the External Hæmorrhoids, and discharged by them, the thing it self, and what daily befalls Patients, speaks, since we see, that even the running of the External Hæmorrhoids does much good to those that are ill of Hypochondriack Diseases.

II. Though the melancholick and adust humour, which is the most obstinate, be infected with no putrefaction, nor easily take it, and therefore is not so fit for concoction; yet it is no less exasperated, and made more earthy and gross, and therefore rendered no less unfit for exclusion and concoction, than a *Cancer* is by digestive and absterfive remedies, applied finistrously and amiss.

III. Preparation is performed by Attenuants and Aperients; yet without any great heating or drying, because, for the most part, there is a certain heat and driness of the melaraick vessels, and these parts, and all near the lower orifice of the Stomach, have something like an Inflammation in them. In which case they offend, who having regard onely to Wind, with which Hypochondriacks abound, do use hot and dry Medicines, whereby the Disease is rather exasperated. Nor on the contrary are coolers and moistners without some opening convenient, seeing it is always proper to remove the Obstructions, which are in those parts. Yet where much watry matter is mixt, hot things

Sennertus.

Willis.

must not be omitted. And so, as the condition of the humour is various in this Disease, and according as this or the other part is most hurt, so the cure requires one while hot things, another while not so hot, or even moderately cooling and moistning, all which things nevertheless must be opening and attenuant. ¶ There are two principal cases of Sick persons, whereto magistral remedies must be accommodated, according to their strength and quality. Namely, either the blood is thick and cold, and earthy, with an obstructed Spleen, which requires hot fermenting Medicines, and especially Chalybeates; Or the Blood being plainly adust and hot, ferments above measure, and the *Hypochondria* do also astuate very much, and the blood and vapours boil up in them, in which state onely temperate and quieting Medicines are indicated, which may stop the immoderate fermentation of the humours, where Chalybeates must altogether be avoided.

IV. The alteration of the peccant humours will be various, both according to the variety of the humour, and according to the fault of every humour. The humour is both pituitous and bilious. The pituitous offends especially, when its acidity or viscosity is increased. The augmented acidity of the pituitous humour will be corrected first of all with a lixivious Salt, and with all things endued with a lixivious Salt; Such, as all Salt extracted out of the Ashes of Plants, as also Coral, Pearl, Crabs-eyes, filings of Steel, &c. For while, by the means of these things, an effervescence is made with the Acid Phlegm, the Acid humour is coagulated with them. But because an excessive effervescence is urgent in this Disease, which causes many Symptoms, we must have a great care, lest it be irritated, rather than checked and amended, by taking things that produce a new effervescence, which will be done, by using first of all these things, by which an Acid Spirit is rather concentrated than coagulated, such as Chalk, next to which are Crabs-eyes, Coral and filings of Steel. But if any one have a mind to use alixivial Salt, that effervescence may be made the less by it, let him temper it first by other means, that is, by some volatile Spirit or Oil: Wherefore *Venice* and common Soap are of great virtue in checking the effervescence. Whenever the pituitous humour offends in viscosity, then it must be incided and attenuated with acid and gumous things, as the humour gives way to the one, rather than the other; which it is easie to experience or try: Yea, it is the part of a prudent Physician, not to think he knows all things; For it is the part of a prudent Man not to begin rashly, but when he has observed, in dubious cases, by what the Patient is chiefly holpen, he may proceed courageously: Therefore, when by gentle procedure a remedy is found, by means whereof especially the Patient is relieved, then we may proceed more cheerfully in the use of it. And divers Gums occur very convenient in this case, *Galbanum*, *Sagapenum*, *Ammoniack*, *Opoponax*, and the like; all, or each of which may be used according as there shall be occasion, and especially in form of Pills. Among Acids, which may also be given, there occur divers Spirits prepared by Art, of Salt, Nitre, Vitriol, Sulphur, and also Wine-vinegar distilled, and sometimes not distilled; wherein, if the bulb of a Squill be infused, it is called Vinegar of Squills, and is an excellent Medicine in this and the like diseases, arising from viscid Phlegm. These things also are good for correcting of viscid Phlegm, Mastick, Amber, and the volatile Salt made of it, as also the sublimated Salt of Hartshorn, Castor, Myrrhe; moreover Steel prepared the common way, or Vitriol of it, with which, some Mens opening Pills are prepared. Every volatile Salt conduces, above all things, to correct and amend the viscid Phlegm, which has a virtue of reducing that humour insensibly to a mediocri-

ty. Wherefore I recommend to all the preparation and use of such Salts, whether they be prepared in a dry form, or in a moist. In the mean time this must be observed, that volatile Salts, prepared in a dry form, when they are very subtil, can scarce be kept, but do easily turn to Air; it is better therefore to prepare them in a moist form, or at least to keep them for use, dissolved in moist and watry things. The bilious humour offends especially by reason of a fixt lixivious Salt, which will be amended and tempered most powerfully by Acids: But because then at the same time an Effervescence is raised, by reason whereof this Hypochondriack disease is produced, it seems not so safe or convenient to make use of Acids, unless they be tempered with a volatile Spirit, by means whereof the violence of the Acid Spirit is not a little infringed, so that a less effervescence is caused thereby. For the tempering also of lixivial Salts, Acids mixt with oily things may be made use of, for all sharp things, as well Saline as Acid, are tempered with fat things. In the mean time we must have a care of oily Acids; when, besides a lixivial Salt, Oil

Sylvius de le Boë.

V. A Lenitive being premised, the first preparative must be *Julapium Acetosum* about three ounces, with half an ounce of Creme of Tartar finely powdered; for they may well be mixt together. When five days are over, again a Lenitive must be repeated, drinking upon it two pounds, either of clarified Whey, or Barley-water. Then we must proceed to open obstructions, and prepare the humours lodged in the veins. To which purpose aperient and mundifying juices clarified may be prescribed, since Medicines made with Honey or Sugar are good for few Hypochondriacks; Thus the clarified juices of Borage, Cichory, Endive, Mallows, Hops and *Ceterach*, may be given the next day after the Physick, and the next day after that half a drachm of Rhu-barb mixt with two drachms of *Flos Cassie* may be given, after which a full Glas of Cichory and Agrimony-water may be drunk. Then the day after the juices may be repeated, and so alternately the Rhu-barb and the juices may be taken.

Fortis, conf. 28. cent. 3.

VI. For a successfull and more accurate preparation, I am willing to abstain from sweet Syrups made of Sugar and Honey, as also from very lower things, since they puff up the bowels, and increase the heat, and these cause a fermentation in the humours. Wherefore clarified juices of Borage, Endive, sweet Apples, &c. must be given to about three ounces, in Broth altered with Mallow, Borage, Cichory, root of Cinquefoil, Cichory, &c.

Fortis.

VII. In the use of Preparatives we must consider, whether an Acid or a Nidorous crudity be more troublesome to the Patient, and conduce to this evil: for although it may be bred of either, yet, as the accidents vary, according to the one or the other, so also the way of cure varies. For in an Acid crudity we may use hot things: but in a Nidorous one, and where great inflammation is, we must use temperate ones.

Sennertus.

VIII. If the Disease be inveterate, gentle Aperients can doe but little good; yet they must be given first. For experience has taught, that these Aperients (*Creme of Tartar*, *Tartarum vitriolatum*, *Vinum Martiale*, *Pulvis cachecticus*) have qualified the Disease, but could never eradicate it. The case is the same in medical Waters: For, used once a year, they open the Inwards a little, but do not take away the Disease it self. It is necessary therefore, that against an inveterate Hypochondriack Disease such things be used, as may pluck up the Disease by the root, such as *Aqua Philosophica*, or *Spiritus Vini Tartarizatus*, if in some convenient liquor it be so given, as to begin with the least and to ascend to the highest drop, from one drop to twelve, and according to the precedent circumstances we must contin-

nuc

nue a while in one dose, and we must add now a drop, and then a drop to it.

Hartmannus

IX. Preparation by Syrups and distilled waters, while the humours are attenuated, and run to the parts obstructed, makes the Obstructions daily worse: for they tire the Patients and Nature too much, they hurt the Stomach grievously, and manifestly destroy concoction.

Crato.

X. Vinegar may be used, but it must be sparingly, and onely for relish sake; and reason tells us, it must be used in cholerick, rather than in pituitous persons, lest the exuberant melancholick juice be fermented with the excessive fowreness, and the swelling of the Spleen be increased, or way be made for fowre Belching.

Martini.

XI. Creme and Crytals of Tartar, and *Tartarum vitriolatum* are so common now adays, that several scarce prescribe any Medicines wherein some one of these is not put; yea, *Tartarum vitriolatum* is called by *Crollius*, *Universale Digestivum*: And I acknowledge indeed, that Medicines made of Tartar have a great virtue in inciding and attenuating melancholick humours, and therefore in opening obstructions. But seeing it often happens, that in a Hypochondriack affection there are found black cholerick humours, sale and bitter, and that are very fowre, and such as contain in them the seminaries of fire as it were, certainly *Tartarum vitriolatum*, and such sharp Medicines cannot be proper for such humours, seeing they do not take off their Acrimony; but such things should rather be used, as temper the bad qualities of such humours, and contrary qualities must needs be opposed to their contraries.

Sennertus.

XII. In Purging: If there be an Acid crudity, and any pituitous or viscid humour be mixt with it, pretty strong things, and such also as purge Phlegm, as Agarick, *Turbit*, *Species Diaturbit*, *Episcopi*, and the like, may be used. But on this condition, that the Patients fast not above two or three hours after they have taken the Physick, lest the virtue of the strong Medicine reach to parts beyond the Liver and Spleen, but it must evacuate onely what is about the Stomach, Liver and Spleen. But if there has been a nidorous crudity, we must use gentle things, as *Manna*, Syrup of Roses, or Violets solutive, Rheubarb, leaves of *Senna*, and lest the heat of the bowels should any way be increased by taking of Physick, it is good after taking the Purge, a little before Meat, to take a good draught of Whey or Posset drink, which both purges and cleanses, and tempers the heat in the Bowels.

Sennertus.

XIII. If crude cold humours be bred in the Stomach, onely through defect of the innate heat, as it happens to Scholars, and such as are too much given to study (then their Belching and Wind are neither fowre nor nidorous) we must abstain from frequent Purgings, because the innate heat is farther debilitated by them: But the innate heat must be increased and cherished, and a good Diet must be ordered. But if the Disease have its rise from cold causes, and be accompanied with a cold humour, and an Acid crudity, we must Purge frequently; for the crude humours are not easily evacuated at one time. So, if some adust humours be bred of a great heat in the Bowels, and if they be fed by that, we must wholly abstain from violent things, which increase that intemperature: But if the humour be thick, and the hot intemperature of the Bowels less, strong Medicines may more safely be used.

Idem.

XIV. When the humour to be purged comes from a large stock of Bloud, abundance of Heat, and from the hot intemperature of some part, no Man need doubt, but the Patients will be disturbed beyond measure, and thereby the melancholick juice will intolerably be increased. In which case gentle Purgatives are preferred before all others, and indeed taken in such a quantity, as may plentifully discharge the humours without too much agi-

tation, and may be sufficient to cut off the cause of the Disease. But if a gross and terrene humour alone cause an effervescence, the nature of the humour requires stronger Purges, which are apt neither to waste the strength, nor disturb the body too much. Therefore they must be given in a less dose, and be often repeated. Finally, when the Body is consuming, and the strength is in a great measure spent by the severity of the Symptoms, and when an enormous adustion and driness is contracted in the humours, then we may well use gentle Purgatives, yet more plentifully than in the first case, but on this condition, that the least occasion may not be given to the agitation of the humours.

XV. In this case Women bear the strongest Medicines, because their Inwards and their Stomach are presently so vitiated, that they plentifully abound with gross viscid Excrements, mixt with a Melancholick humour.

Martini.

XVI. After taking of strong Purges, lest the parts of the Medicines, cleaving to the coats of the Stomach, should cause erosion, or a long flux of the belly; before meal let a decoction of Barley be given, made with Water, not with flesh-broth, adding some Sugar, or broth of Pease, or of black Vetches. And for the strengthening and detersion of the mouth of the Stomach, let some Pilsan be given, to them especially, who are inclined to Vomit, and let sleep be indulged a little.

Idem.

XVII. Antimony helps all Diseases in general, which black choler has caused, and them especially which have an inflammation in their Hypochondria. Indeed I saw at Prague a Parish Priest, who became Melancholick and doated. He had ten grains of *Sibium* given him, which a little after carried off abundance of black choler by stool, wherewith were mixt, as it were, pieces of flesh, which looked like *Varices* cut into pieces: for these excrements looked rather like blond than any other humour. This did him so much good, that the next day he seemed to have recovered his understanding: And because he was of a strong body and good courage, no wonder if he easily bore so great a quantity of Physick. But the *Sibium* must be well prepared.

Matthioli.

XVIII. The humours that are not to be amended by Alteration, and are exuberant, must be carried off by convenient ways, and especially by stool, as a way more proper and easie to Nature; seldom by Vomit, unless the peccant humours cannot be carried downwards, or do affect a way upwards. Divers things evacuate the pituitous humour downwards, among which *Coloquintida* is chief, Trochiscs made of it, called *Albandal*, &c. Among Chymical things all Mercurials are commended, divers precipitates, white, yellow, red, &c. and *sublimatum dulce*. For I would advise all to abstain from the Corrosive, seeing it can onely be given in a very small quantity: And besides, it always, in a manner, uses to cause Vomiting, and violently disturbs the body. Divers Antimonials are here also excellent good, though most of them also do Vomit. Rheubarb, Scammony, Aloes, Tamarinds, &c. purge Bile. Where the saline part of the bile principally offends, Root of Jalap, Mechoacan, *Gummi Gotte*, &c. may be used; Among Chymical things Antimonials are convenient. Antimonials evacuate bile most conveniently by Vomit, which, because they use to carry off Phlegm as well, and also discharge both humours downwards, and moreover, because they may be safer given than Mercurials, I prefer them before all others, if they be made of Glafs of Antimony, its *Regulus*, *Crocus metallorum*, *Mercurius vitæ* (which is an Antimonial Medicine) flowers of Antimony, and the like.

Sylvius de le Boë.

XIX. It will be advisable to give Clysters every other day, that the Vapours tending upwards may be drawn back, and part of the peccant humour may be carried off: for if they go far into the Guts, they

they draw the greatest part of the filth from the melaerick Veins. I knew a certain Nobleman, who by frequent Clysters was so relieved of this inveterate Disease, that he seemed to be perfectly cured, when many other Remedies had been used in vain.

Riverius.

XX. In the progress of the Cure, if there be any necessity to empty the Sink of the Belly, it is better to doe it with Suppositories, than with Clysters, lest a Vapour arising from thence might increase the Pain.

Martini.

XXI. Sometimes, when the Disease continues long, Reason teaches us, we must procure a Vomit in such as are used to it: for vomiting has been often found to cure those, whom purging could not. It may be procured first of all by gentle things, by and by, when they will doe no good, by stronger, yet such, according to *Ætius*, as create no trouble to the Belly and Stomach. For Experience, as well as *Ætius*, has taught us, that several, upon taking violent Vomits, without the violence of any other causes, have fallen into Melancholy. ¶ Oftentimes a Vomit, especially of *Aqua benedicta* cures one beginning; for by this means the filth being got out of the Stomach and parts adjoining, renders the Cure more easie, which afterwards must wholly be employed in opening obstructions. Aperients therefore must either be given before or after Vomits. It must be left to the Physician's prudence, whether to doe, which is here of great moment, since the success of the Cure depends thereon.

Idem.

Hartmannus.

XXII. *Hippocrates*, 2. de morb. sect. 3. v. 248. in the Cure of the Drying Disease, which is the hypochondriack Disease, begins it with evacuation downwards, and then finishes it with vomiting upwards. The reason is, because evacuation must be begun in that part which is next the Disease; so that in Diseases infesting parts below the Diaphragm, we must begin with purging downwards: but with vomiting, if the Disease be in parts above it, according to *Aphor.* 184. Which must be understood, when the Disease wants both evacuations. Because therefore in this Disease the part affected is below the *Septum transversum* (for the parts serving the natural faculty especially suffer in this Disease) for that reason he begins with purging downwards. Which way of Cure is consonant to reason; For, 1. We must first evacuate the parts next to the Disease, both because as *Celsus*, l. 2. c. 9. says, the matter which prevails in the parts next to the place affected, is more malignant than that which abounds in the rest of the Body, wherefore it must immediately be evacuated by the next way, that it may more readily be carried off, and lest if it be carried off by a long journey, the whole Body be infected. 2. Lest going a contrary course, the matter remote from the part affected be drawn thither, when it is disturbed by Physick, and thereby the Disease so increase, that it either kills the Patient, or afterwards will not give way to Medicines.

Martianus,
Com. in eum
locum.

XXIII. Concerning the drinking of *Spaw* waters there is no small clashing among Authours. Some, as *Sennertus*, do altogether approve of them, because by the Minerals, from which they derive their virtues, they both wash the first ways and carry off the vitious humours, that lodge in them, by stool and urine, heat the Stomach, and strengthen the Liver and Spleen: But yet heating and drying may be feared from the external use of these waters, not the internal. Others, as *Claudinus*, wholly reject them, for their said drying faculty. *Montanus* both rejects and admits them: He thinks they are good for the coldness of the Stomach, an inseparable Companion of this Disease: but upon account of a hot Liver and Bloud, he will have the Liver and Spleen, and all the region of the Loins guarded with a refrigerant: This way, he says, the waters doe no harm, because they fix more in the Sto-

mach and cold parts, and onely pass through the other parts, and make no tarrying there. I think they are good, if a cold Stomach have gathered abundance of thick and viscid Phlegm, and if there be no great heat in the Liver, the hurt of which part may in a great measure be avoided by applying a cooling Ointment, and giving some cooling Broth after drinking of the waters, and after the complete taking of them, by using a cooling and moistning Bath for some days.

Riverius.

XXIV. It is made a question by some, Whether the use of Steel be proper? For since this Disease proceeds from a dry humour, and, if it be black bile, a hot one also, Steel seems unfit to conquer it: besides, its virtue is to make the Belly costive and dry. But though these things be so, yet long and frequent experience shews, that Steel is an approved Remedy for the Hypochondriack Disease, Cachexy in Women from obstruction of their *Menses*, and for other Diseases arising from pertinacious obstructions of the Spleen and Melaericks, and therefore to be much valued. Among the Ancients, see *Pliny*, lib. 34. c. 15. *Ægineta*, lib. 3. c. 49. *Dioscorides*, lib. 5. c. 53. *Ætius*, Tetrab. 3. f. 2. cap. 11. *Oribasius*, *Rhazes*, and others: Among the Neotericks, *Claudinus*, *Respons.* 29. *de ingr. ad inf.* in Append. sect. 2. *Mercatus*, de Morb. Mul. l. 2. c. 6. and others.

Sennertus.

XXV. I say Steel is as it were the proper Alexipharmack of hypochondriack Melancholy, because by using of it I always find happy success: for in opening obstructions (on which the whole stress of the cure lies) it comes behind no Medicine: For it is temperate in the active qualities; but in this Disease we must abstain from proper Aperients, which are hot in the third degree, for fear of an Inflammation. Therefore *Galen* says, that Hypochondriacks are helped by cold things. And its driness, since it does good by cooling, need not be feared, since that may be amended by Conserve of Borage, &c. or by taking of Ptisan before Supper. Therefore I prefer it before Bath-waters, which cannot so conveniently be corrected.

Claudinus.

XXVI. But such things must not be used at the beginning as strongly move Urine, lest they carry the vitious matter out of the first ways to the Liver or *Vena cava*, increase the Disease, or cause one in the Kidneys: Or lest the more subtle parts being carried off, the grosser, which are turned to Melancholy, should remain. ¶ *Hollerius* rejects them for another Reason, that is, because there is no communication or passage from the Spleen to the Kidneys: But modern Anatomists shew a passage (See *Laurentius*, Qu. 38.) and there is a very convenient passage from the Spleen to the Kidneys by the emulgent Arteries. Besides, experience testifies, that often black matter is discharged by Urine, to the Patient's great benefit. I observed this a year ago in a Noble Lawyer, who being subject to obstructions of the Hypochondria and Spleen, after three days pain at his Stomach, made water for two days time, like Ink in colour and consistency, to his great relief: Yet in giving of Diureticks, we must, according to *Capsivacellus* his mind, keep within bounds, and both in discussing and moving Urine, we must proceed without much heating. *Ætius* admits them, l. 2. *serm.* 2. c. 10. yet not till the Body and first ways be exactly purged.

Rondeletius.

XXVII. There are some, who for several years, in the beginning of Autumn and Spring, have their Spleen swell, with a pain in the Hypochondrium, and a livid colour all over their body, growing worse and worse, which nevertheless is often cured by voiding abundance of Urine, as black almost as Ink, for a week.

Martini.

XXVIII. The error of the Physicians of our age must not be imitated, who either give onely heating and drying things, for breaking and dispersing of the Wind, neglecting in the mean time the Intemperature of the Liver, in which case indeed it is

it is very likely, the Disease is much increased: Or, if obstructions in the Spleen be urgent, they cure by violent Coolers and Moistners, wholly neglecting Digestives and things that are able to open and soften its obstructions.

Idem.

Sylvaticus.

Idem.

XXIX. Asses Milk is good, made purgative with *Diagridium*, and three pounds of it taken for eight or ten days every morning, for it will temper the heat of the Liver, and will purge hot humours. ¶ It will not be amiss to take two pounds of Asses Milk with two drachms of Cream of Tartar.

Fortis, cent. 3. conf. 29.

XXX. But it must be taken as soon as it is milked, with Sugar in it, but by no means with any Bread, lest it tarry too long in the Stomach, and fill the Head, the taking of it must be continued for forty days. In the mean time, lest any gross part of it should curdle in the Mesentery and stick there, every ten days one ounce of Cream of Tartar dissolved in Broth may be taken, to the end those ways may be cleansed.

XXXI. Concerning these words, *Aph. 64. 6. It is bad to give Milk to them whose Hypochondria are swelled and rumble*; it must not be passed by, that he joined these two Symptoms, to shew that Milk may be given to such whose *Hypochondria* do onely rumble, and to such who have them onely swelled. For if the Liver swell with Bile, Milk is proper; so *lib. de int. eff. v. 225.* in the second *Hepatitis*, from Bile flowing into the Liver, from which it grows hard and painful, he gives not onely Asses Milk or Goats, to purge, but he gives Cows Milk also, for several days to temper the Bile: In like manner, when the Belly rumbles without any swelling, Milk is not prohibited, because, if the rumbling be caused by Bile running up and down the Belly, it may be good to give Milk. Wherefore *Hippocrates* forbids giving of Milk, when the swelled *Hypochondria* do also rumble: for these things depend on abundance of Wind, having its rise in the *Hypochondria*, for which Milk is bad, not onely because it is windy, but also because, since persons so affected are subject to acid corruption, the Milk in their Stomach, through analogy, easily turns sowre.

Martianus, Comm. in cit. Aphor.

XXXII. If great heat be found in the *Hypochondria*, an hour before Meat half a pound or a pound of Whey made of Goats Milk may conveniently be given, which both tempers the heat and cools the veins of the Mesentery, and wastes the matter, which is the cause of this obstruction; but the use of it must be continued for eight or fourteen days. And that it may do no damage, but may be more effectual, convenient Powders or Pills may be used before the Whey. Take of root of male Fern, Cinquefoil, Wormwood, *Cardus benedictus*, Germanander, Spleenwort, Agrimony, each 1 drachm. With *Syrupus Acetosatis Citri*, make large Pills. Give six or ten of them. Or make an Extract of these Powders: So the Whey will have more power to open and penetrate, and it will doe less harm by cooling. But it must of necessity be taken in a large quantity, especially when the Stomach is not very weak, namely, three pounds or more. And let one glass be drunk after another, sipping it, and after taking the Whey, he must walk, to the end it may insinuate it self, and may carry off the matter, that causes the obstruction, by stool and urine. Nor need the large quantity be feared; For if it must pass the Veins, and be voided again presently by stool and urine, a great quantity is required: So Bath and Spaw-waters must be drunk in a great quantity.

Sennertus.

XXXIII. Concerning *Spiritus vitrioli Martis*, there is a question whether it perform in Hypochondriacks the same that other Chalybeates do? Since there is no small alteration of the Substance, and other Acids are Enemies to Melancholicks, and exalt black Choler. I think truly it does not doe all things that other Chalybeates doe, my reason is, because other Chalybeates give a stool, but this

does not, which must be ascribed to the change of the Substance. Yet nevertheless, I make no question but it is good for Hypochondriacks, because of its aperient virtue. Nor does its Sowreness hinder, for onely the excessive use of Acids hurts Melancholicks and exalts black Choler; on the contrary, their moderate use is proper.

Idem.

XXXIV. I think *Elixir proprietatis* is very good for them: for by reason of the Aloes and Spirit of Sulphur it egregiously opens the obstructions: It corrects the putrefaction of the humours not onely because of them, but because of the Saffron and Myrrhe: It egregiously dissolves Wind, because of the Myrrhe and Spirit of Wine chiefly: And it strengthens the Heart and Stomach by its whole Substance.

Idem.

XXXV. *Crocus Martis* tinges the excrements, which denotes the extraction of the Vitriol, the fating of the austere humours, and, in a word, the actuating of the Medicine, just as by the mixture of Vinegar and Galls in water Ink is produced. But if the excrements be not tinged, it is a sign, unless a very small quantity be sufficient, that the Medicine is not well actuated.

Wedelid.

XXXVI. You write that in hypochondriack Diseases *Antimonium Diaphoreticum* is commended. Indeed, I should not wholly reject it, had it any portion of the Nitre left in it, for so it would be far fitter to open obstructions of the Vessels: But if it be without Nitre, I am afraid lest when the thin humours are spent, the gross and earthy ones grow harder and increase the obstruction. ¶ Do you doubt whether it consume onely the thin humours, or attenuate, and put in fusion, the gross ones also? I affirm the first, and now the same may also beneficially be given for gross humours also, but I affirm it with a distinction: For the gross humours are either already actually tartareous, or onely mucilaginous and phlegmatick, in these I allow it; in the former I deny it. A scorbutick Man was cured by me, whose blood, when it was let, grew like a gelly in water: And among other things I gave him *Antimonium Diaphoreticum*.

Doringius ad Sennert. cent. 2. ep. 30.

Sennertus Epist. 35.

XXXVII. If an austere pancreatick Juice be bred (which frequent hypochondriack Suffocation, with fear of Strangling, as also vomiting of austere humours does argue) volatile Salts must frequently be used, and especially Aromaticks, and indeed in a small quantity, suppose four, five or six drops in a spoonfull of Wine: for I know nothing hitherto, which so powerfully, effectually and so quickly amends the Austre in us, as every volatile Salt, but especially an Aromatick one, which, I attest, I have experienced a thousand times.

Sylvius de le Boë.

XXXVIII. Capers are commonly commended, but they must be used aright, for they are not onely difficult of Concoction, but the Vinegar also, wherewith they are pickled, ferments and exalts the melancholick humour. They are the best prepared, if they be pickled with a third part of Corinths, the same quantity of Sugar, and a little Vinegar.

Sennertus.

XXXIX. Cold and moist Alteratives, or Attenuants, need not be feared, because there is Wind; for it is dry exhalations, raised by heat out of a dry *Minera*, and not vapours from a moist one, as most men falsely think, who therefore mistake, and give *Hiera* and Aloëtics and hot Medicines to their Patients with ill success.

Fortis.

XL. In this Disease *Galen*, 3. de loc. aff. 7. has taught, that the Stomach is always hurt, according to *Diocles* his opinion; yea, daily experience shews as much. Notwithstanding, the hurt of it must not be reckoned Idiopathick, but rather Sympathick: Wherefore he, 2. de locis 4. has told us, that when Concoction in the Stomach is amiss, we must presently consider the parts about it, namely, the Liver, Spleen, Mesentery, *Omentum* and the rest, before we lay the blame on the Stomach it self.

self: for it often comes to pass, and especially in this Disease always, if it be legitimate, that the Stomach is affected privatively, not positively, by the excessive circumambient extraneous heat, both of the Liver and the Hypochondria, because of obstructions propagated from the lacteal Veins to the Mesenterick, not onely from crudities, but also from thick blood, where, I think, an Inflammation is under the Pylorus, from which the heat is diffused into the bottom of the Stomach, disproportionate to Concoction, which therefore not concocting, but corrupting the food, turns it into a nidorous and strange quality, by reason whereof it being altogether unfit for Concoction, is thrown up by Vomit, as an useless load, by the expulsive faculty, irritated sometimes by an acid, wherefore, according to Galen, as Anxiety befalls the Patient after Meat, so relief comes by vomiting. Nor is crude and viscid matter opposite to this nidorous corruption, when it is mixt with a cholerick and bitter Juice, because the end and effect of any hurt in the Concoction of the Stomach is Crudity: And Acidity little resists, when oftentimes it proceeds from Heat, according to Trallianus, who inveighs against these Physicians, that ascribe Acidity always to Cold, from the instance of Vinegar: Yea, and black Choler, which is the most acid, corroding and fermenting the earth, though cold, yet has a hot, yea, a burning cause, upon account of its sharpness, so Vinegar owes all its coldness it has to heat onely.

Idem.

XLII. Hot Anointings outwardly must be avoided, both because, if the Stomach be hurt, it is not essentially, but by consent with the Hypochondria, and rather by hot and dry exhalations than by cold and moisture: Wherefore in this Case and Disease I suspect sulphureous Mud and Waters, and think them altogether hurtfull for the Hypochondria; and because the lobe of the Liver lying upon the Stomach is heated before the Stomach it self.

Idem.

XLII. Fomentations, when the Disease is tedious, is a proper kind of preparation: because by their warmth and steam they comfort and sustain every part and its innate heat, they stir up, mollifie and dissolve the humours that are lodged in them, and make them fluid, that they may more easily give way to an attractive Medicine. ¶ But we must have a care that we do not cause sweat by them, the humour to be purged, must onely be mollified.

Martini.

Fernelius;

XLIII. By the virtue of a Bath in an hepatic, hypochondriack Disease, the humours lodged in the capillary Veins, and sending out fuliginous exhalations from thence are put in fusion, Fluxions are diverted and dissipated. The Vessel of warm water must not be made for sweating, but so that the Patient may lye on his back in the water from his Knees onely to his Navel. But we must have a care lest any crude humour stick in the first ways, and lest there be any impurity in the Bowels, which by the Bath might be distributed over the whole Body.

Martini.

XLIV. In two cases the hypochondriack Disease seems to forbid a sulphureous Bath. First, when there is a great inflammation and heat in the Hypochondria. Secondly, when there is any swelling in them. Although then the Abdomen may be plentifully anointed with Unguentum rosaceum Mesues, to prevent the penetration of the water.

Fortis.

XLV. Neither hot nor temperate, aperient, emollient nor strengthening Ointments are proper. Not hot, because by virtue of them new matter is drawn from another place, and the part is parched with heat; besides, they harden more, when the thin parts are dispersed. Not temperate ones, because if they be emollient, they will make lax the part, and new filth will run into the parts, as into a Sink. Not astringent or strengthening, because they will prevent Insensible Transpiration.

Sanctorius;

XLVI. Some commend a Stove, wherein they say there is great virtue in attenuating and concocting crude, melancholick humours: Yet care must be taken, that the humours grow not too hot by the use of it, and that, the thin portion being dissipated by Sweat, the rest either grow not hard about the Bowels, or degenerate into black Choler: Which Inconvenience you will prevent, if every fourth day you omit the Stove, and take things to evacuate the prepared humour.

Enchirid.
Med. Prae.

XLVII. You must take notice, it sometimes happens, that upon giving Aperients, especially when the obstructions are opened, that the Belly is so loose, that a Dysentery might be feared to follow. Then we must provide for it with strengtheners, especially Tincture of Corals and Elixir proprietas.

Hartmannus.

XLVIII. Crocus Martis, especially Sulphuratus, breeds nidorous belchings, and tinges the excrements a little. For as in the preparation of Vitriol of Mars we see, by the accession of an acid flagma a dissolution is made into bubbles and exhalations, so it is no less done by the acid humours abounding in hypochondriack Bodies, which are as it were sated with Martial things and consequently edulcorated. And indeed this manner of Martial things acting is very easie to demonstrate. Hence Belchings arise, even from simple filings of Steel, an argument that the Stomach acts upon them, and from the reaction of these, and their mutual dissolution belching follows, as signs and products of exhalations: for the effect testifies of its cause. Therefore Croci Martis aperitivi are given on purpose with Stomachicks and Aromaticks. So we use to prepare our cachectick Powder of Pulvis stomachicus Quercetani of root of Aron, Crocus Martis and Oil of Cinnamon. For they correct Mars and help Nature to conquer him. But sulphurate especially causes belching, as being cruder, therefore we use not to give Crocus Martis so much, prepared the crude way, as we give it first freed from the Atoms of Sulphur by a new calcination, which is better, more subtil, and obedient to the heat of the Stomach, a thing, which must principally be observed in Hypochondriacks who are delicate and of a rare texture, for these belchings swell like rotten eggs. Septalius, lib. 9. cant. 58. commends this made into a Powder and prepared with Vinegar.

Wedelius;

XLIX. We must have a care that we promote not the fermentation of the humours by Emulsions, and consequently left, while we would cure Thirst, Weakness, &c. we doe more harm than good. Therefore in general whenever the organs of the humours is in the lower Belly, it is advisable to abstain from them: for (as Hippocrates says) unequal things ferment. Wherefore in Hystericks, where it concerns us to quiet the Symptoms, and also in Hypochondriacks, they cannot be proper.

Idem.

L. The quieting of the Paroxysms and of the most urgent Symptoms consists especially in checking the effervescence of the humours, in discussion of the rising exhalations, asswaging of Pain. The effervescence will be stopt chiefly with Medicines that correct the acrimony of both humours (the Acid pituitous and the Bilious) which is owing to fat and spirituous things, but variously mixt with other things, according to the various manner of effervescence in each person. Wherefore that Medicine which does one Man good, often does another harm. And it must be a temperate Medicine, which must consist of much water and little oil, but that so mixt with a volatile salt, that it may mix with the water. For all the skill lies here (I repeat it) The temperate Medicine must consist of much water, as being a thing which by it self and a lixivious salt, is fit to dilute an acid spirit, and so infringe its strength; To this water oil (but a little) must be added, as being apt to temper both the lixivious salt and the acid spirit. And because oil cannot

cannot be mixt with water, but by means of a Lixivial Salt, this must be there also; but corrected and volatilized with a volatile Spirit, because the same and a volatile spirit, use to temper a lixivious salt and an acid spirit. In such a Medicine therefore so tempered there occur three things, Water, Oil and Volatile Spirit tempering the two Sharps, the lixivious Salt, and the acid Spirit.

Sylvius de
le Boë.

LI. Among the Symptoms of this Disease I have observed that a sense and fear of Suffocation and Strangling is not onely peculiar to Women, though it take them oftner than Men. I think this grievance has its rise from various exhalations, and especially austere ones, rising from the small gut, to the upper mouth of the Stomach, and so to the Gullet, and causing a sense of Suffocation and Strangling in these parts. But whenever part of these exhalations tends by the lacteal Veins to the thoracick Duct, penetrates into the right ventricle of the Heart, and into the Lungs, and sticking there, causes shortness of Breath; no wonder, if then, either through want of proper Medicines, or abundance of Exhalations, the Patients are sometime suffocated and choaked; which, I remember, once happened to one of my Patients, abundance of austere Exhalations being translated to the Lungs, with a violent hypochondriack Suffocation, as the most urgent Symptome then, and returning with such violence every Paroxysm, that it would give way to no Medicines, but caused Death. And this Evil had been neglected at the beginning, so much does it concern us to cure all things in time. Certainly this Ail is often too much neglected, not being sufficiently known to several Physicians, and therefore the seldomer cured. For curing of this volatile Salts are very good, and amongst them Spirit of Sal Ammoniac, which if it had no other virtues, yet in regard to this Ail it ought to be esteemed by all Physicians. Except in this case, I do not remember any Patient of mine ever died of an hypochondriack Suffocation, to whom I use in time to prescribe and inculcate volatile Salts, which all persons may easily use, even in their ordinary drink. Whereas *Castor*, which many use with good success, is an ingratefull thing, and is loathed by many. The Cure of this multifarious Disease is performed first of all by discussion and suppression of all manner of Exhalations. Secondly, by correction of the humours whence they arise. Thirdly, And by the diminution of them, where they exceed. All volatile Salts and Aromaticks, and especially oleous ones, discuss all manner of Vapours. Among which also *Castor* it self may be reckoned, seeing it is part of an Animal, or an Excrement, which is the same thing; seeing all the parts and each of an Animal abound with a volatile Salt. And every particular humour, as it offends in divers qualities, must in a divers manner be corrected, and diminished with its Purgatives. But as often as a manifest sense of Strangling is urgent upon the Patient, besides this Spirit of Sal Ammoniac, *Castor*, is also convenient and its Tincture, as also distilled Oil of Mace and Amber, if one, two or three drops thereof be taken. When these Exhalations are more glutinous or also more sharp, then, besides volatile Salts, sweet Spirit of Nitre, Oil of Orange Pill, &c.

may be used. When they are more watry, and there is rather a faintness of Spirits than sense of Strangling, then to the volatile Salts there may profitably be added aromatick Tinctures of Cinnamon, Saffron, Nutmeg, Mace, &c. made with rectified Spirit of Wine, not neglecting the taking of Hydragogues now and then, to abate the watry humours.

Idem

LII. And Difficulty of Breathing comes in for its share, which is grievous enough to many, the chief cause whereof is various Winds and Vapours, often produced by humours in the small Gut, which being carried by the lacteal Veins and thoracick duct to the right ventricle of the Heart, and so to the Lungs; and tarrying there awhile, so they both distend the Lungs and keep them distended, and so hinder the playing of them, and consequently respiration, and therefore must be discussed with the same Medicines.

Idem

Medicines especially made use of by eminent Physicians.

1. *Tartarus vitriolatus*, with extract of Fern and some convenient Water is an excellent deopillative. ¶ Take of Gum Ammoniac 2 ounces and an half, dissolved in Vinegar of Squills to the consistency of Honey. Add of Powder of Spleen-wort, Dodder, each 1 ounce; Oil of Capers 2 ounces, of Violets 1 ounce, of Bricks and Wax what is sufficient. Make a Plaster and apply it.

Agricola

2. *Diapyliticum* in hypochondriack melancholy with crudity of the Stomach is a singular Remedy; by the use whereof *Galen* happily cured desperate Hypochondriacks, reduced almost to extreme Leanness. ¶ The virtue of *Mumia Viperina* is admirable in renovation of the blood.

Baroletus

3. Aperients in this Disease give great relief, among which I attribute the first place to the root of the greater Rhapontick Centaury. The bloody juice is expressed out of the fresh root. Make a Syrup with Sugar, of which 2 spoonfulls may be taken every morning.

Crato.

4. This is a famous Physician's secret Water for hypochondriack Melancholy; Take of Flowers of Bugloss, Borage, *Stachas Arabica*, each half an ounce; Rosemary, Majoran, Balm, each 2 drachms; Root of Bugloss 4 drachms, Betony 2 drachms, Water of Borage, Bugloss, each 4 ounces; Powder of Cinnamon, Galangal, Cloves, Saffron, Seed of Basil, each 1 drachm. Pour 5 pounds of *Rhenish* Wine to them. Let them stand in infusion for 2 or 3 days. Distill them in *Balneo Mariae*. The Dose 4 spoonfulls.

Finkius

5. An ease Remedy for this Disease. One took onely some Cichory Broth for the first Mese, and he recovered.

Rhodium

6. *Sal vitrioli Martis* excels all other Medicines; Take of Oil of Vitriol or Sulphur half a pound, Spirit of Wine 1 pound. Put them in a clean Frying-pan. Cover them with a Board, so within 15 days the Salt will shoot, which may be set in the Sun or an Oven to dry, stirring it now and then. Keep it safe from the Air. The Dose from 12 grains to 20.

Riverius

A GUIDE TO The Practical Physician.

BOOK IX.

Of Diseases beginning with the Letter I.

Icterus, or, The Jaundice.

The Contents.

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 It does not require the same cure with the Sturvy. XIII.
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 Medicines.

Fortis, conf.
 55. cent. 2.

I. **W**hen Bile abounds, if the abundance of it be not diminished first, blood must not be let, because it is a check to the Bile. If a Vein be opened to cool the heat of the Liver, blood must be let sparingly, since letting of blood is not a proper remedy for obstructions, and it must be observed whether it comes out black; for when an Icteric was let blood, it appeared all yellow.

II. The Question is, Whether Cholagogues may be prescribed? The Affirmative may be maintain-

ed, because Bile is superabundant; therefore *Jacchinus*, lib. 9. cap. 51. prescribes Purges of Scammony, Electuary of juice of Roses, and the like. *Mercurialis m. m.* lib. 3. cap. 33. propounds the like Catharticks which purge Bile, to the end the humours which feed the Bile poured out to the Skin, may be carried off. The Negative is concluded from *Hippocrates*, lib. de intern. affectib. where he dissuades Cholagogues, lest the body be more disturbed: Besides, frequently in the Jaundice, it is not abundance of Bile, but effusion of Bile following the obstruction of the Gall-bladder; that offends, but these will not remove obstructions. Observe for a decision, according to *Mercatus*, lib. 4. praxic. cap. 4. that in a Jaundice we must purge two manner of ways. First, with these Catharticks, which carry off and absterge thick and stopping humours, that, when the Obstruction is opened, the bilious humour, that is bred, may freely pass to the places natural to it: by which means alone, if you carefully apply attenuants, and incisers, you will cure the Disease. Secondly, there is need of such Medicines, as diminish and evacuate the Bile, which the natural vessels cannot receive. *Hippocrates* his saying intimates the former: *Jacchinus* and *Mercarius* intend the latter.

Horstius,
 Prob. Dec. 7.
 24. 5.

III. Whether are strong Catharticks necessary? *Altianus*, according to *Ætius* his judgment, holds the Affirmative, because weak things, by reason of the driness of the Belly, doe no good, and Nature, translating the matter to the circumference of the Body, does not much help these evacuations. *Mercatus* concludes on the contrary, judging, that strong Purges are very hurtfull, because in an obstructed body it is better to Purge the Bile from far by degrees, and to get the thick humour out of the obstructed vessel by little and little, than by a sudden forcing of the excrement to make the Obstruction greater and firmer, as it often happens to the unskillfull

Idem, ibid.

skilfull and careleis. Wherefore it is more advisable to use gentle Purges several times, than by any violence to render the Disease worse.

IV. The Belly may be loosened with lenitive Electuary, and Creme of Tartar. The matter contained in the first ways may be prepared with Honey of Roses, and *Jalapium Acetosum*, or with half an ounce of Creme of Tartar dissolved in Broth. A Purge may be given the first time of *Cassa*, with Lenitive and *Pilul. de tribus*, or an Infusion of Agarick, Rheubarb, *Senna*, &c. The second preparation must be made with Syrup of juice of Borage, Cichory, *Byzantium simplex*. But because sugared things in Bilious Diseases are not very safe, therefore about three ounces of juice should rather be taken, in a decoction of Cichory, Dodder of Time, Agrimony, Cinquefoil, Germander, Horehound, Wormwood, first taking a *Bolus* of Extract of Rheubarb, with *Tartarum Vitriolatum*. And then he must be purged with a little stronger things, respecting rather the thick humours than the bilious, such as *Diaphanica. Pilul. de tribus*, &c. and then 6, 7, 8 or 9 ounces of *Decoct. Epith. Mesues* may be taken every day, upon which, about three hours after, he may drink one pound of Whey of Goat's Milk, then for a few days he may take juices of Cichory, Borage, Fumitory, Mallows, prepared in Broth. Both indeed, because this Disease, according to *Galen*, gives not way to weak Purgatives: And because things that purge Choler are had before the attenuation of the humours, according to *Aetius*, with whom *Galen* agrees, *lib. de Nat. Hom.* who uses deobstruents, and afterwards things to purge Bile. Therefore we must proceed to stronger Aperients. And though *Galen, lib. de Purg. Med.* boast, that he has cured Ictericks presently with one Purge; that Jaundice was from heat of the Liver, and redundancy of Bile, without any obstruction of the passages. Therefore two ounces of *Syrupus Fernelii Cachecticus* will be very proper in some aperient Broth, to which, if a just evacuation succeed, the taking of it must be insisted on for twelve or fifteen days: But if not, more efficacious aperients must be given, as *Crocus Martis Aperitivus*, made with the Acid of Sulphur, with Extract of Rheubarb, Ammoniack, &c.

Fortis, conf. 54. cent. 3.

V. In a new Jaundice, Emetick Medicines, while the Tone and Faculties of the *Viscera* are good, often give relief; inasmuch namely as they rid the Stomach of a load of Phlegm, wherewith almost always it is burthened in this Disease. Moreover, by irritating the choledochal Vessels, and by shaking all the hepatick ducts, they both open their obstructions, and make a passage for the Bile by the usual ways.

Willis.

VI. A Boy ill of a Dropsie devoured seven or nine Lice, the Disease by degrees disappeared, and in the room of it there followed Paleness, excessive Appetite, Atrophy and Death. When his Body was opened, there appeared an unusual cluster of Lice, of a monstrous bigness. If they do any good at all in the Jaundice, they do it by their Volatile Salt, which makes the Obstructions to remove, and the liquor necessary for our bodies to move more briskly.

G. Hannus, AB. Danic. an. 1675. obs. 23.

VII. I Judge, whether there be an Obstruction of any Biliary Duct, or no such thing can be supposed, the Bile then undergoes a notable change, by reason whereof it is carried more impetuously and copiously towards the blood, with which notwithstanding it is not so well mixt as it used, but is onely confounded with it, and therefore it more easily recedes from the blood, and not onely joins it self to the Skin and external parts, but joins it self also to the Muscles and the Inwards, and dyes and tinges them with its colour. For Bile naturally constituted, both in the small gut and in the right Ventricle of the heart, is not onely loose, but intimately mixt with the occurrent humours;

and so indeed, that it cannot any more be separated from them: Which union is made by reason of the effervescence of it in both places upon its meeting with an Acid. Both the said effervescences are either diminished, or taken away. The cure therefore of the Jaundice will consist in this, First, in taking away the more remote causes. Secondly, in correcting and removing the mediate causes, glutinous Phlegm, stopping the biliary duct, &c. Thirdly, in amending the proximate cause, corrupt and vitiated Bile, being too spirituous, and rendered unfit for effervescence, that it may be carried again to the Guts. Fourthly, in taking away the discolouring of the Skin. Glutinous Phlegm is corrected and incided with Aromaticks and volatile Salts. When it is corrected, Phlegmagogues carry it off, which may also serve for Correction; for Example; Take of Root of Madder, greater Celandine, mallage, each half an ounce, Flowers of Broom half a handfull, Seeds of Columbine, Parsly, Anise, each 2 drachms, crude Tartar 1 drachm and an half. Boil them in an equal quantity of White-wine and water, what is sufficient. In twenty ounces of the Colature dissolve of *Syrupus Diacnicus*, Syrup of Cichory with Rheubarb each 1 ounce and an half. Mix them. Let the Patient take some of this Apozeme twice or thrice a day, so as he may have two or three stools, and may void the Choler together with the Phlegm. When the Jaundice comes from the poison of a Viper, or from any other, then, to correct and expell it, all Sudorificks abounding with a volatile Salt are good, which answer both Indications. Hither conduces *Antimonium Diaphoreticum* to fifteen grains, *Bezoardicum minerale*, to half a scruple, volatile Salt of Hartshorn, or of any Animal, got by distillation: and if it be strong, five or six drops or grains of it, often given in some convenient liquor. Treacle also is good, and various preparations of Vipers. The Bile of Ictericks, that is depraved and vitiated, and made too spirituous, will be amended especially by oily and fat things, by means whereof an aptitude to right effervescence, is restored to the Bile. Thus I have cured several of the Jaundice, by giving them five or six ounces of a decoction of Hempleed in fat Cow's Milk, boiled till it burst, and strained, twice or thrice a day. Thus also, having premised what ought, I have several times successfully cured a Jaundice by giving one drachm of any Soap dissolved in warm Milk and Sugar, once or twice a day. Soap indeed seems to doe good, as by its lixivial Salt it dissolves the obstruction in the intestinal Biliary duct; which (because it cannot be said of Hempleed, which cures the same Disease) I suppose is good; First, Upon account of the Lixivial Salt, but fixt, of which it is made, as it being joyned to the Bile, corrupted by its excessive spirituousity, corrects and diminishes the too great volatility and spirituousity thereof, by assuming to it self some share of the volatile Spirit luxuriant in the Bile. And, Secondly, Upon account of the fat or oil, but thick, and not at all Aromatick or Volatile, by means whereof it takes off the edge of the volatile and spirituous Salt, which has the predominance in the Bile. This opinion of mine seems to be confirmed by Saffron, familiar in the cure of the Jaundice, which being commended for its fatness, in that very thing, favours my opinion; for Saffron is easily joined to a volatile Spirit. Therefore volatile Spirits may be fixt and bound, and brought to tranquillity with fat and oily things. Whence it appears, if, when they are joined with the Bile, in too great a quantity, or exalted in it, they cause a Jaundice, by making it more volatile and moveable; that this said volatility and mobility of Spirits must be conquer'd by oily things, and such as cause gentle sleep, and thereby the Jaundice must be cured. The discolouring of the Skin goes away of it self, but it's sooner removed by

Sylvius de
le Boë.

subtile Sudorifics, and things endued with a volatile Salt, whether Sweat follow or not.

VIII. In this class of Medicines, whereby the stercitious dyscrasie of the blood is intended to be relieved, Chalybeate Medicines seem to have a place of right, wherefore they doe as great good in the Jaundice as in other diseases of Cachexy, as well by opening the obstructions of the Bowels, as by depressing the effusions of the Sulphur and fixt Salt, and by volatilizing the blood. Therefore filings of Steel, or its Powder (the Mineral frame of it being dissolved) or the Vitriolick Salt extracted, may conveniently be added to Decoctions and Infusions.

Idem.

IX. Hence it is, that the Waters sometimes cure Ictericks to a miracle, who have been left to the Prognostick: Though also these drunk in a large quantity, as they pass through all the Vessels, do also open the hepatic ducts, how much soever stop.

Willis.

X. If a hot Intemperature of the Liver be the cause, it must be altered, whether it be with or without an Inflammation; But this I advise, that their counsel must not be taken, who use external Medicines actually cold and astringent to the Liver: for they hinder the passage of the Bile to the whole body, and so for an intemperature they raise an Erysipelaceous Disease.

Saxonia.

XI. Since it is difficult to know when stones arise from Bile, no wonder, if the cure of them look like an unheard of thing to many Physicians: Yet because, when stones after death are found in the Gall-bladder, the rest of the Bile looks like Lees of Oil, and is full of filth and subsiding dregs, as I have several times seen voided by Vomit, I should think that in such, there were fear left some part of the Bile might turn to stones, whilst another turns to such excrements. And therefore then Medicines should be used to dissolve these Bilious stones, and to hinder any concretion. Among things that dissolve Bilious stones, I make no scruple to place Roots of Grass, and the Herb it self, either distilled, or which I prefer, boiled or bruised, and the juice squeezed out of it, making it palatable with Sugar, since it is known by abundant experience, that Cows and Sheep, which in Winter feed on Hay, and in whose Biliary duct a strong or calculous crust grows, when in the Month of May they feed on green grass again, are, by degrees, freed from that Ail. A certain Argument, that in green and fresh grass there is a virtue to dissolve stones, which perishes, when Grass is dried into Hay. Spirit of Nitre also is good; which I therefore commend in this case, and especially when it is made sweet and mild with Spirit of Wine, which may safely be taken to ten or twelve drops in this or the other drink several times a day. Volatile Salts, and especially oily ones, hinder a new concretion.

Sylvius.

XII. Although the black Jaundice come especially from some fault in the Spleen; yet, I think, Platerus, his opinion, *Pract. l. 1. tract. 3. cap. 2.* should not wholly be rejected. Who judges, that its cause is preternatural Bile, corrupted in the melaerick vessels, and there growing black, because it is not probable that such Bile can come from the Spleen, seeing it has no cavity or Sinus there where it can be gathered; nor does there come any vein from the Spleen, by which it can be carried to the Cava. Sennertus endeavours to reconcile this to the common opinion, judging, that black choler, after it has been gathered in the melaerick veins, when abundance of it comes to the Liver, is mingled with the yellow choler, and gathered in the Gall Bladder, and the colour of the yellow choler is changed thereby, which, unless it be evacuated by convenient ways, is diffused with the blood all over the body, and causes the black Jaundice; notwithstanding that there is no branch, which reaches from the

Spleen to the Cava, because by means of the *vena portæ*, the humours gathered about the Spleen may reach to the Liver, and may be derived to the rest of the body.

XIII. Although there be some agreement between the Scurvey and the black Jaundice, as both diseases come from some fault in the Spleen, through the weakness of which, in each of them, the rest of the body is affected: But notwithstanding, since the manner of hurt, as is manifest by divers signs, is far different, therefore it follows, that the *αἰσθητὴν ἀκίνητον*, or principal thing capable, of each disease, to wit, the Spleen, is differently out of order. This diversity introduces a diversity of cure, inasmuch as in the Scurvey, we have not regard simply to abundance of melancholick blood, and obstructions of the Spleen, as we have in the Jaundice; but we are forced to be most solicitous about a certain specifick corruption, the proper matter of the Scurvey, which requires its peculiar and proper remedies.

Horstius,
Probl. Dec.
7. 24. 6.

XIV. Hippocrates 2. de morb. n. 1. would have the veins under the Tongue opened in the black Jaundice. Petrus Salius thinks, this cure has respect to a Symptome, not to the Cause, which is store of black choler in the large veins. But seeing this is a production of the external Jugular, which is a branch of the *superclavia*, and of the *cava ascendens*, What should hinder, when it is much exhausted, that less of the greater blood may be exhausted, but that it may much alleviate this Disease, since it does more nighly and quickly evacuate, than the veins of the Armes.

Severinus,

Medicines especially made use of by eminent Physicians.

For the Yellow Jaundice.

1. A drachm of Gum Ammoniack dissolved in 2 Augenius; or 3 ounces of Oxymel, or Hydromel, given for four days, or more, five hours before Meal, cures the Jaundice to a Miracle.
2. One recovered onely by taking condensed juice of Cichory.
3. One was cured of this disease by Conserve of Flowers of Broom and Marigold.
4. A Decoction of Root of Celandine cures the Jaundice.
5. A Decoction of Strawberry-leaves carries off the Tartar, as I have often seen.
6. A Decoction, or the Powder, or the Essence Pauli, of *Scorzonera*-Root, is very good in a contumacious Jaundice.
7. The White Excrement of Chickens is a most certain Medicine.
8. Take some Goose-dung, dissolve it in Worm-wood-wine. Drink it hot in the morning for three days, and Sweat upon it.

Bartholinus.

Borellus.

Forestus.

Hayne.

Quercetanus

Schmid.

Ileus, or the Twisting of the Guts.

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Medicines.

I. IN the Iliack Passion the cause of inversion of the peristaltick motion of the Guts is usually thus. Sharp and malignant humours are discharged by the blood in a fever newly begun, into the Stomach and Guts, next at hand, whereby the Stomach is first forced to invert its motion, and with great violence to throw up the troublesome matter contained in it, by the Mouth. Then the small Guts joined to it, being already weakened, give way to the strong motion of the Stomach, and with these the greater are drawn into consent, the Stomach inclining to vomit, leading the dance. This Disease I call the true Ileus or Twisting of the Guts. The method of curing it has hitherto been unknown, whatever some may boast of the use of Quicksilver and Bullets, which besides that they do little good, they often do a great deal of harm. I take this method with success. When it is plain from Clysters rejected by the Mouth, and from other signs, that it is a true Ileus, then I endeavour these three things; 1. To hinder that contrary motion in the Stomach, which causes a like motion in the Guts: 2. To strengthen the Guts weakened with the sharp humour: 3. To free the Stomach and Guts of those humours. To satisfy which Indications, I insist upon the Cure in this manner: 1. I prescribe 1 scruple of Salt of Wormwood to be taken morning and evening in a spoonfull of Juice of Lemons; and between whiles I give a few spoonfulls of distilled Mint-water, without Sugar or any other addition, twice every hour, by the repeated use of which even alone both the Vomiting and Pain arising from it will quickly vanish. While these things are doing, I order a young Whelp to lye continually to the Belly. But after the Pain and Vomiting have ceased for about a day or two, then I give a drachm of *Pil. coch. maj.* dissolved in Mint-water; which Water (that I may more certainly prevent the return of the Vomiting) I order to be taken often all the time of Purging: Nor must the Whelp be removed, before the Patient take his Purge. I have observed, it is to no purpose, to give these Pills, or any other Cathartick how strong soever, till the Stomach be strengthened, and so reduced to its natural motion, and the Guts also be reduced to their natural motion, for otherwise all Catharticks that are taken will prove emetick, and will do more harm than good. This is the reason that I offer no violence by Purgatives, till for some time I have used those Medicines that respect the Stomach. I prescribe a very spare Diet; so that I allow no more than a few spoonfulls of Chicken-broth to be taken twice or thrice a day. But in the mean time I order the Patient to keep his Bed all the time of his Sickness, till signs of a perfect cure appear; and also I order him for a long time after his recovery to persist in the use of the foresaid Water, and to fence his Belly well with a double Flannel from the cold, that he may not relapse, which People in this, above any other Disease, are apt to do.

II. Concerning a Vomit Question may be made: for if the Twisting of the Guts have the mortal vomiting (of the Ordure) it seems not to be irritated: Notwithstanding, it is convenient at the beginning of the Inflammation onely, to wit, when much corrupt and sharp excrements are gathered in

the Stomach and upper Guts, which may be transmitted to the Inflammation: for if the humours do not abound in these first ways, a Vomit is dangerous. It is good also in an Ileus from sharp humours; for if such be gathered in the Stomach and Guts, by reason of bad Food or Physick; they must be purged by Vomit. But the Vomits must be very gentle and epicerafick, as Warm-water, Barley-water, &c.

III. Because at the beginning of the Inflammation the faeces are retained, it is sufficient to give Medicines, that are cool and repress the Inflammation, *Cassa, Elect. Diaprun. simpl.* Whey of Goat's milk in abundance: But when the Inflammation is increased, these things do no good, and we must use stronger Medicines: Then *Elect. de succ. Rosar. Rosat. Mesues*, about half an ounce with 3 drachms of *Cassa* is proper: And Oil of sweet Almonds with four or five grains of *Diagridium*, and a little Sugar of Roses. In this case we may try all things, rather than suffer the excrements to come up at the Mouth; therefore we may venture on Antimony or *Elaterium*, which may be given in a small quantity, about four or five grains in Wine, whatever the matter be. And let no Man object, that the Inflammation prohibits these things, for an Inflammation, when it is fixt, is treated with hot and digesting things: therefore though they be hot, they do no harm, and the abundance of excrement retained does more harm, than Physick does, if it purge. Therefore no mean Physicians in deplorable cases give Quicksilver, which presently causes a stool by its weight. ¶ Some successfully give a Pill of Glais of Antimony, which makes way by its weight, and by its cathartick virtue discharges the excrements.

IV. A Woman about thirty years old had had a groin rupture, which swelled a little, for two years, after a disorderly motion of her Body, she was taken with frequent Vomiting, and brought up her ordure, and what she brought up was very offensive, by its foetidness, both to the Patient and to the By-standers. She was cured by five Antimonial Clysters, a Loosness following for several days, which exceeding required the help of *Opium*, and found it propitious. Such operations as these may be tried, if the loss of strength and desperateness of the Inflammation do not hinder.

V. Clysters, yea, and Suppositories, being brought up by Vomit, do sufficiently testify, that in an Ileus, the passage of the Guts is not so stoppt, as is commonly reckoned, but there is rather an inverted motion of the expulsive faculty in the Guts. *Galen* acknowledged this cause clearly enough, 2. *de Sympt. caus. cap. 3.* so that it is a wonder this has not been taken notice of by Practitioners, considering that it is of no small moment towards the Cure, but when the fibres are relaxed, this motion abates. And Experience it self testifies, that such evacuations are often increased by strengtheners and astringents, and on the contrary are checked by laxatives and emollients.

VI. We may not, upon the score of Phlegm, proceed to very attenuating things, as to generous Wine with *Aqua vite*, *Elizir. vite* with Cinnamon water, prescribed by *Mercatus* and *Salius*: But first of all, let him take about five ounces of fresh Oil of sweet Almonds, with four ounces of Linseed Oil; about six or seven hours after let him go into a Bath of sweet Oil, to which an emollient and laxative decoction may be poured. When he is got out of the Bath, and wiped, let him take 10 drachms of fresh *Cassa*, after which, if there be no fear of Vomiting, let him drink some Broth altered with Mallows; then let him go to sleep, let him take a little but very nutritive food, and after eating let him go to sleep again; and about four hours after let him take a Clyster to soften and evacuate the excrements; Take of a decoction of Mallow, Betes, Mercury, Chamæ-

Saxonia.

Idem.

Rolinsci.

Sennettus.

Chamaemil, 1 pound; *Mel rosar. solut.* Oil of sweet Almonds, each 3 ounces; Sal Gem 3 drachms, Yolks of Eggs N^o 2. Mix them. When this is done, we must rest, or rather the laxatives must be repeated, to wit, fresh Oil of sweet Almonds mixt with Oil of bitter Almonds, or a little Wine of *Crete*, and the Patient must be put again in the Bath. To which, if the Disease will not give way, we must proceed to tumefacients, to things that remove the excrements, and thrust them down with their weight.

Fortis.

VII. Several Authours testify that Quicksilver may be taken without any harm, for by its weight it does disintangle and loose the Gut that is as it were tied on a knot, thrusting down the hardened and stopping excrements. *Hab Heers* affirms he has often seen it given without any harm, when it has been often strained through a leather, it being voided in a moment and carrying the excrements along with it. After taking of it he presently gave a Clyster of pure *Crete* Wine; by means whereof he has saved several, that have been ready to die of the excessive tension of the Colon. ¶ *Paræus* says several have been cured by drinking three pounds of it onely in water; but so great a quantity is suspicious: for there is danger of extinguishing the innate heat by its cold, and of the concretion of the blood in the veins. Some give two ounces in a rear Egg, but one has had very good success. ¶ *Petrus Pena*, as *Velschius* obs. 43. relates, cleansed the Quicksilver from the leaden part by boiling it with Wine and Vinegar, and then passing it through a leather, then he tied it in a bunch with a thread, in a thin parchment wherein Gold had been beaten: he inclosed an ounce and an half of Quicksilver so purified, and covered it with a glew made of Gum Tragacanth, and when it was dried in a gentle fire, he took off the thread, and gave the Patient the Pill to swallow, dipt in Honey or Syrup; so the glew being presently dissolved in the Stomach, the Quicksilver purged plentifully. One was cured by twice taking such a thing.

VIII. *Hippocrates*, 3 de morbis, propounds as the last Remedy blowing into the Belly by a Smith's bellows, after which an emollient Clyster with trochiscs of Alhandal should be given, that the excrements may be got out. *Aurelianus* disapproves of this Remedy, because the Wind that is forced in with the Bellows may doe harm by its coldness. Yet this Remedy is good, upon the experience of *Amatus Lusitanus*, cent. 1. obs. 100. and of *Epiphanius Ferdinandus*, who saved the life of *J. Altmarus* his Son by it, when he was ready to die of the Iliack passion. For it does not onely good by untwisting the Guts, but by opening a grievous and contumacious obstruction, by dilating the Gut.

IX. In the twisting of the small Guts much cold mere Wine must be given, according to reason, till sleep or pain in the Legs arise, *Hippocr.* 2. epidem. sect. 6. He shews a very fine way of curing an Ileus, and one that I have often experienced; not of every one, but of that which is caused by a gross Wind distending the small Guts, or carrying the hard excrements to the small Guts, or by a cold Juice settled there. For nothing will better cure such an one than mere Wine: for it concocts crude things, extenuates gross ones, dissipates Wind, digests and carries it through the Body: Wherefore either by concocting or dissipating the cause, or thrusting it into another place, it cures this Disease: For Wine uses to cause sleep or pain in the Limbs, and both these things are wholesome in this Disease. Sleep indeed, because by rest and indolence the faculty is refreshed, and the heat being called inwards, the cause is concocted: The Pain in the limbs or joints, because when such an Abscess is made, the former Disease uses to cease, as we have it very observable in Gouty persons; There is scarce a Disease from which they are not freed, when the Gout comes upon them. For, according to *Hippocrates*, it is impossible

that all things should be in pain at once. Therefore these very Reasons convince us that Wine is good, because it causes sleep and pain in the Legs, and when it does either of these things, it is enough. For if in these pains Stupifiers be often usefull, because they cause sleep, which yet are otherwise hurtfull to the Disease; How much better is Wine then, which is both somniferous, and of it self good to take away the cause of the Disease? Yet it will not doe these things every way, but, that it may be able to doe them effectually, give much of it and mere Wine: for diluted or in a small quantity, it neither causes sleep nor pain in the Legs: Much of it, if it be given all at once, cannot be kept, but will presently be vomited up again, or if it were kept, it could not be concocted by the weak faculty; therefore it would grow sowre, and being turned to Vinegar it would increase the Disease. Therefore much mere Wine must be given by little and little, by frequent and small draughts, so it will be kept and be concocted, and will help to concoct, and doe other good offices.

Vallesius.

X. In a Twisting of the Guts, from sharp and malignant humours, *Ætius* commends Treacle after Vomiting, to whom all his Successors adhere. But I should recommend Treacle or other Alexipharmacks onely when the poison is cold, for in hot poisons you must rather use Milk or Whey, mixt with water of Sorel, *Terra Lemnia*, or some other Alexipharmack, but cooling.

Saxonia.

XI. It has been observed sometimes, when several Clysters, and very strong ones have done nothing, that external emollients of the Belly by fomentations, anointings, &c. have done much good: Emollient Clysters also may be given. Nor would it be useles to take emollient things by the mouth, as Oil of sweet Almonds, fat Broths, with Mallow, or Marsh-mallow, boiled in them; Seeing that *Maid in Matthæus de Gradibus, cap. de Vomitu*, who in the Iliack passion vomited up both Clysters and Suppositories, was cured with fat Broths, when other Medicines had been used in vain; And although such things should be rejected by Vomit once and again; yet the taking of them must be continued: For so, when the fibres of the Guts are relaxed, their perverse motion is quieted.

Sennertus.

XII. In an Ileus from Inflammation I do not at all commend a Bath administered to the whole Body, though *Rondeletius* approves it; for if it be cold, it drives the humours inwards; if hot, it melts and colliquates them, and renders them inclinable to the place affected; As *Galen* also 12 meth. cap. 3. has observed. But a Bath is convenient in an Ileus from hardened Excrements, whether it be of Water altered with Emollient things, or of Oil.

Saxonia.

XIII. When the Disease is an Inflammation in the small Guts, sharp Clysters are not proper, lest the excrements be drawn to the part affected from the remote parts, nor over deterfive ones, lest by irritating they increase the Pain: It is hurtfull also, when a great quantity is given, which reaches almost to the part affected.

Rondeletius.

XIV. If the Rupture of the Guts be so great, that when they are got out at a little hole, they cannot get back again by the same hole, and cannot afford a passage for the excrements downwards, it occasions an Inflammation and Gangrene; which are often increased, or produced by fomentations, applied amiss and overhot, as also by a preposterous and violent rubbing of the swelled part; and by the violent forcing back of the swollen Guts.

Sylvius.

XV. A young Man twenty four years old, of a melancholick constitution, fell into the Colick, which, after many things had been tried in vain, degenerated into the Iliack passion, with straitness about the Heart, he swallowed a leaden Bullet of 2 drachms weight, well covered with 1 drachm of Quicksilver, and lest it should hurt his Jaws or raise

a Pty-

Melchior
Fride. in
Mise. cur.
an. 1672.
abf. 96.

a Ptyalism, it was artificially wrapt up: After three hours he broke wind and had ease, and the fourth hour there followed two stools, in which he voided above six pounds of matter of party colours, yet he recovered without any harm.

XVI. A poor Woman, after an ill course of Diet, fell into an obstruction of the Belly, which lasted three weeks, so that she brought up the excrements at her mouth, as in an *Ileus*. Divers things were used, without any benefit. At length she often drank the Juice of *Bardorffe* Apples, that were rotten, to about six pounds, upon which she grew loose, and the Woman narrowly escaped Death.

XVII. If the *Iliac* passion be joined with a Rupture, a supervening mortal sign whereof is the vomiting of the Chyle and Excrements, when the Gut *Ileon* is split into the *Scrotum*, after the falling down of which *Hippocrates* never saw any Man recover, the onely way of Cure, if there be any, is, as soon as the violent pain of the left side of the *Scrotum*, reaching, vomiting, and such things have convinced you of the Gut *Ileon* being split; Then, without delay, the very same day the ligament or *vinculum inguinis* must be cut in sunder with a Razor, that is, where the *peritonaeum* is joined with the Groin by a coat, or the testicle of the same side may be cut out.

Duretus,
comm. in
Hollerium.

Medicines especially made use of by eminent Physicians.

1. A Decoction of Dill is admirable good, though Men do vomit after drinking of it, Bread must be put in warm water, and immediately warm pieces of it must be give to eat.

Agnetia.

2. This gives great ease, Let 4 ounces of Wine of *Crete*, and 16 ounces of Oil be boiled together, to the consumption of the Wine, this given for a Clyster mitigates pain, causes sleep, softens the excrements, and breaks wind.

Benedictus.

3. The Blood of a Bat anointed on the *hypochondria* by admirable experience is reckoned to stop the pains of the Twisting of the Guts.

Joel.

4. They that are held of this Disease, are wonderfully relieved, although they vomit their ordure, if they eat pieces of hot bread dipt in oil. They will be saved, though they were in a manner dead.

Oribasius.

5. Spirit of Turpentine, given inwardly, egregiously dissolves the Tartar, and causes the Excrements to descend and pass the natural way.

Petrus.

6. If the Disease come from thick and viscid Phlegm, a Decoction, or Infusion, or Water of Radish is highly approved, and also strong Wine, in which inciding and attenuating Herbs have been boiled.

Rhudius.

Inappetentia, or, Want of Appetite.

The Contents.

Phlegm, which is the Cause of it, must be beaten by little and little. I.

It requires rather the correcting some fault in the Liver, than in the Stomach. II.

Whether Spirit of Vitriol recovers an Appetite? III.

(See Diseases of the Stomach, BOOK XVIII.)

I. **BILE** and Phlegm especially hinder the sense of Appetite. Concerning Phlegm it must be observed, that it, as it is cold, indicates heating things, yet it must not be done all at once and on a sudden, lest the humours being suddenly dissolved breed wind, and be distributed into the whole Body, and cause obstructions: wherefore

here we must act with caution: and first of all, we must take care that the Patient eat and drink sparingly, and use an attenuating Diet. Salt Meats also may be given the first melf, because Salt has an inciding and attenuating virtue; and afterwards things that have a deterfive faculty may be used, such as the decoction of Cabbage, boiled but a little. But first of all, to attenuate, let *Oxymel* be given with a fourth part of Honey of Roses, afterwards that Medicine which is called *Diatrion Piperis*, and that the simple, which is onely made of the three sorts of Pepper: for although Pepper heat violently, yet it is of thin substance and parts, which are therefore quickly dissolved, and therefore doe the Liver no harm.

Senacutus.

II. Loss of Appetite, and loathing of Flesh especially, follows the excessive heat of the Liver (for Physicians are under a mistake, who, when their Patients loath Flesh, so that they can scarce bear the smell of it, think the Stomach is onely ill) Flowers of Cichory must be given, either preserved with Sugar, or fresh, and the obstructions of the mesaraick Vessels must be helped: For Flowers of Cichory do not onely help a hot Liver, but they excite the faculty of the Stomach, and free from obstructions. ¶ Roots of Cichory, especially the wild, have as much virtue in them and more.

Crato.

III. There are some, who perfectly abhor the use of Spirit of Vitriol, as appears from *Sylvaticus* contrav. 48. and others, who infer several inconveniences from the noxious qualities of common Vitriol not prepared and not separated from its impurities, but to no purpose, for it is one thing to consider what *Galen* and *Dioscorides* say, where they onely speak of crude Vitriol, another to consider prepared Vitriol, of which there is great variety, so that it alone to several Hermeticks may seem sufficient to furnish an Apothecaries shop. The question here is concerning Spirit of Vitriol, which is now-a-days frequently used. That it conduces much to check great putrefaction both Experience and *Crato* apud *Scholtzium* do testifie, though greater caution must be observed in dry Bodies than in moist. We likewise daily experience, that it does much good in a dejected Appetite, then especially, when the internal parts of the Stomach are, as it were, lined and obstructed with pituitous and mucilaginous excrements, so that the Spirits which cause hunger, that is, the innate heat of the Stomach, is oppressed and rendered unfit to perform its operation. As it contains in it self a penetrating, inciding and cleansing virtue, so it attenuates, digests and consumes the mucilaginous matter and crudities. Wherefore consequently it excites the hungry Spirits, that before were buried as it were, which produce the usual effects in extimulating the sense of the orifice, and breed hunger.

Hortius.

Infantium Regimen, or, The Regiment of Children.

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Whether Children new born should be washed in hot or cold Water? II.

They must not be swathed too strait. III.

Whether the Mother's milk be always best? IV.

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Whether a Nurse who has her menstrua, should be rejected? VI.

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Regimen recens Natorum, or, The Regiment of new born Children.

I. **S**OME unskillfull Midwives use sometimes to tie the umbilical Vessels and Navel-string of Children; either too strait, that it may the sooner be cut off; or too loose, so that the ligature is not sufficient to keep in the blood; As it happened to two Infants, whose strength was so exhausted by bleeding that they could by no means be recovered. Therefore these Vessels must be carefully tied with a thread several times double: And, for the greater security, when they are cut off, strew on this Powder, with which they must always be furnished; Take of Aloes, Frakincense, Dragon's-bloud, each 1 drachm; burnt Hart's-horn, Terra sigillata, Fine-flower, each 2 drachms; Hare's-down, cut very small, half a drachm. Mix them. *Hildanus.*

II. Let the Midwife wash the new born Child gently with her hand, and let her have swatches and clothes, as soft as may be, in readiness: for either to wash the body much, or more than once, or to strew on astringent Powders or Salt onely, are usually the causes of more hurt than good, wherefore the use of them is deservedly left off; for it is better to clean the body with warm water at most, than either with dry things to condense, or to heat, or cool, or soften the body, that is above measure soft, as they used to doe of old. But if the Child be born cold, and full of mucous and

Tt viscid

viscid excrements, it is sufficient to wash it in warm Wine, yea absolutely necessary. But if it be born lean, hot, and much extenuated, it is the wisest course, not onely presently after it is born, but for three or four months time to anoint the Child, after making it clean, with Oil of *Sesamum*, when it goes to sleep. But in such bodies it is a very good way to put the Child to a Virgin, who must be young, fleshy, of a good habit, and fresh coloured, who must cherish the Child with her own heat in bed: For I have known several saved by the benefit of this onely. ¶ Some Northern people wash the bodies of their new-born Children in cold water, yea, they dip them into it, to make them strong. *Galen* reprehends the custome, because of the sudden change from heat to cold, and constipation of the pores of the Skin, which may be the cause of putrefaction, breaking out, and other diseases. Nor must they be washed with warm water. *Fabricius Hildanus*, cent. 14. obs. 56. observed, that a Child, after such washing, lived subject to Catarrhs. *Galen*, before the Child be swathed, if the constitution of its body be without any fault, sprinkles it all over with Salt finely powdered, lib. 1. de san. t. c. 6. He is blamed by *Averrhoes*, because that age cannot bear the acrimony of the Salt, and for the danger, left by the attrition of the Salt, the vitious juices, which perspire by the Skin, should be kept in. It were better, according to *Avicenna's* advice, to wash the body in Wine, wherein red Roses have been boiled, or in its Urine.

III. In some Countries and Families Children are swathed too strait, hence it often comes to pass, that their body grows gibbous, and their Limbs crooked, or otherways deformed. For their bones being yet tender, soft and cartilaginous, are easily wrested, and removed out of their natural posture, which, when they grow hard, keep their vitiated figure. Country peoples Children have large Breasts, because they are not tied; or lay looser in the Cradles. They that are swathed tight, have their ribs compressed, and their Breast grows sharp. Maids who lace themselves too strait, that they may look slender, either die of a Consumption, or grow Crooked. A certain Midwife, as *Borellus* observes, cent. 2. obs. 59. was accounted a Witch, because all the Children she swathed, grew either Consumptive, or lived weakly, which was caused onely by too strait compression. Nurses also sometimes tie their heads, for comeliness sake (because sharp ones seem finer to them) hereby the Skull being compressed and growing long, the Brain and its Ventricles are compressed, which being so weakened, is rendered obnoxious to Catarrhs: Such, if they grow up, are dull of understanding, because the spirits are not elaborated aright, or their free passage through the windings of the Brain is hindered. It is an error also of the Nurses, to carry their Children always in the same Arm, whereby they grow left-handed, or rest them on their Legs onely, whereby they make them lame.

IV. It is the best way for Mothers to give their own children suck, because their Milk is made of the same blood, wherewith the Child was nourished. But the Nurses Milk, although it be Milk, and indeed Humane; yet there is not one jot less difference in this, than is between the constitution of body, and temperament of the Mother and Nurse; and no Nurses Milk agrees so well with the Child's body as the Mothers: Since therefore every Animal is nourished with things like it self, the Mother's Milk must be preferred, because it is more like. *Phavorinus in Gellius*, l. 12. c. 1. brings many pretty reasons for it, but moral ones. But because many Mothers are not of a good constitution, but diseased, and sometimes also of bad manners, or because great Persons, and others who are weak, cannot bear the trouble of giving suck, a well-disposed Nurse must be chosen, which is not so

subject to passion, of a composed mind, not a Fool, Angry, Drunken, Melancholick, Salacious, but of a good habit, in the prime of her years, &c.

V. Some reckon it a superstitious thing to chuse a new Milk, because, to speak properly, Milk is never old, since new is bred every day, whose Nature may vary according to the different temper of the Woman, and the difference of diet, but not because of the act of breeding Milk. Yet it were better, that the Nurses Lying-in should coincide with the birth of the Child to be brought up, or not differ above a month; for a more serous and diluted Milk is proper for new-born children; such as Nature has given the Mother, when she has newly lain in, that it may the better cleanse the filth from the Stomach of the young child: But an old Milk is without doubt thicker, and therefore not so proper.

VI. *c. a Vega* thinks, the Milk is made purer, if the feculent blood be evacuated, by a mixture with which in the body before it is polluted. He instances them that give suck, in whom, because they have their Menstrua but seldom, a Cacochymie grows in their body. One that gave suck, in *Hippocrates* 2. Epidem. Sect. 2. had Blisters all over her body: but when she gave over suckling, they went away in Summer. If therefore suppression of the Menstrua, even in them that give suck, be a cause of Cacochymie, Why are Nurses desired, who have them not? For is it not better to have them every Month, than that the blood should be foul? *Valerius* replies, Since there cannot be an expulsion of the excrements, without a separation before, all the blood must of necessity be disturbed every month at the time of excretion (which we know from antecedent pains of the whole body) and when it is disturbed, the Milk must be spoiled. It is better therefore to chuse a temperate Nurse, and to procure good juices for her, than from her menstruous purgation to expect the purging of the blood, with its frequent disturbance. Beside, there is order in the work of Nature: Since therefore menstruous blood is the principle of generation, when it appears, nature inclines to another birth, wherefore she begins to be unfit for the former, and therefore the Child must be put to another Nurse. But if there should be no more Nurses to be had but onely one, who has her Menfes every month, while they are upon her, let her give suck as little as she can, and let her avoid it more a day or two before they come, which is the time of secretion, than when they are come.

VII. Some condemn little Breasts, and not without reason, because they breed less Milk. And I know not why great Breasts should be counted bad: for they afford a large quantity of Milk, which may be good: And it is not the capacity of the Breasts, but their temper, which alters the Milk.

VIII. Let the Nurse wholly abstain from Venus, for it disturbs the Milk, draws the Blood to the Womb, whereby the Milk is spoiled, and the quantity of it abated. Yet *Varandæus* allows it to such as live with their Husbands, lest their longing disturb them. And we see Mothers, who live with their Husbands, and lye with them, do yet suckle their Children without any harm. *Bonacchius* writes, that the Mother's Milk does not corrupt, if she conceive by the same Man.

IX. Whether is it good for Children, who are taken with any disease, presently to change their Nurse (as it is for other bodies, when they are taken with any acute disease, to change the course of their Diet into a more spare one) and take another who has a thinner Milk? Here, first of all, it must be considered, on what occasion the Child began to be sick: for if from an external cause, whether Meat, or Drink, or Air, it seems a vain thing to change the Milk, that is familiar and friendly, into an unaccustomed one, at a time, when the strength

is least able to bear an alteration of custom. In which case, though in other Diseases it be not necessary to change, if the disease be acute, in which the accustomed food, how friendly soever, must be changed into a thinner, it is convenient to chuse a Nurse, which has a thinner Milk: which indeed is not so necessary in diseases that are not so violent, nor so acute, and because of the gentleness of the symptoms waste the strength but little. But in acute diseases, or if the Child be ill, through some fault in the Milk, whether that come from some disease in the Nurse, be it from the temperature of the Breasts being destroyed, or from the diuturnity of giving suck, or from alteration of the diet or life, or from her being with child, or from a sudden fall, or from any other cause, either because the Milk is not so pure and choice as it was at the beginning; or be not convenient for the Child, when grown, as it was before; then indeed, without any delay, we must change the Nurse, for one who has a Milk like to the former, if the Disease be of small moment: but if it be an acute one, for a Nurse, who has a very thin Milk, such as the violence of the disease requires, for the reasons alledged. For when children are ill I cannot commend the endeavouring to correct the Milk in the same Nurse, by Medicines or Purges, for it will be much more spotted, and in hopes of future health we give the Child far worse aliment; And therefore it will be better to change the Nurse, than to add one disease to another: For it is certain, that what diseases come from diet, are amended by diet, and what do not come from thence, do not increase thereby. But when the Child refuses to take the Breast any longer, then indeed you are bound of necessity to attenuate and correct the Milk in the Nurse her self, not indeed by Purgers, when the Child is sick, but by alteratives towards that quality, which is contrary to the Disease, or towards tenuity, as is necessary in acute diseases: for you may extenuate it, by feeding the Nurse with Parsly, Fenil, &c. and by moderate exercise. But if any salt or bitter taste, or the like, be predominant in the Milk, I should rather chuse to change the Nurse, than endeavour in vain to correct it.

Mercatus.

X. The usual food of Children, when they are weaned, is Pap, made of Flower, Wheaten especially, and Milk, of a middle consistence, between a Solid and a Liquid, although it come nearer the former; for it cannot be supped. Because of its viscosity, for which it cannot get through the narrow passages, it is the Authour of many diseases, especially of Obstructions: For if a most tenacious Paste be made of Flower and Water, for external use, what may not be made of it by addition of viscid and thick Milk? It will certainly make a food, difficult of concoction and stopping. Some endeavour to amend this fault by long boiling, to take the crudity off the Flower; But by that means the Whey, which gave it a little fluidity, is exhausted, the butyrous part remaining, which is viscid and tough; and the caseous, which is the gross and earthy portion of the Milk. Others, by mixing it well, and stirring it, make Pap with a gentle boiling, lest the Whey should be lost, from whence it has a virtue to permeate and loosen the Belly; But neither thus is the mischief avoided, for the Flower remains crude, incoctible, and insuperable. And this is the way to make it, not onely proper for children, but for the use of the Kitchen, of which an easie dish may be made, by mixing it with Milk, Broth, &c. Take Barley, or Oaten flower, put it in a Bag of thick cloth, boil it in a Kettle for twelve hours, so as that the Water may be always above it, keeping down the Bag, by laying a weight upon it. When the Flower is taken out, set it in an hot Oven, after the Bread is taken out, and keep the Mass for use. The excellent *Theodorus Zwingerus*, in his *Theses* for his degree,

made Anno 1680. *med. acad. regias*, does curiously reprehend this fault of making Pap the common way. "The Matter, saith he, of Pap, is Flower and Milk; nay, and often instead of this it is made of Water, of which things, without Fermentation, a Paste is made onely by simple boiling, with which they cram children every day as long as they will hold. But now it is evident to every Man, if not from his own, at least from other Mens experience, that the strongest stomach is notoriously offended, with Bread but a little, or not at all leavened; concoction is disturbed, and Acid crudities are gathered: If it fare thus with strong Men, who can any longer wonder, that such Pap is often corrupted, and turned into a glutinous, Acid Paste, in young Children's stomachs, which are far weaker?"

XI. One set time for weaning cannot be fixt for all, nor again, can there be any certain Law and Rule, since one body differs from another body, and one nature from another nature; Moreover, all cannot bear weaning alike; but, according to the solidity of the flesh, strength, condition, and appetite of Milk; or otherwise, so you may advise weaning sooner or later. Many Children, that have been weaned before their time, have born it so ill, that the Physicians have been forced to put them to the Breast again, for fear of a Consumption, or some future diseases: Also, when weaning is long deferred, it is then a difficult thing to be done, and not without danger; in which thing we must know, that no Child should be weaned before dentition be perfected, or a little before it; for that is the Law of Nature in craving solid meat. Moreover, the Child must not be weaned all on a sudden; but, as his Teeth begin to come, so, by degrees, and by little and little, he must be fed with more solid Meat. Besides, you must not wean him, without that firmness, concoction of food, and alacrity to actions, which is sufficient to bear the weaning. And the sum of the case is, that he crave other food, digest, sleep in the night, and do not at all regard Milk, for it is a very difficult thing to wean Children, that live by sucking.

Mercatus.

XII. If it be convenient to give a Child Milk, to Purge him, At what time must the Medicine be given to the Woman? I answer, If the opinion of *Galen* and his followers were true, to wit, that Milk is bred of blood onely, the Physick must be given at least a day before, because, before it pass so many concoctions, less time cannot intervene. But it is evident from *Hippocrates* his Doctrine, *lib. de Natur. Pueri. v. 250.* that the matter of Milk is twofold; one indeed plentiful, which comes from meat and drink not yet concocted in the Stomach; Another little, which is blood ascending from the Womb to the Breasts, and this looks rather like an Agent than the Matter. For I observed in less than an hours time, that Milk became purgative in Mrs. N. who, having taken a Purge, gave the Breast immediately to a Girl a year old, not thinking that the virtue of the Medicine could have come so soon to the Breasts (for I had forbid her to doe it) which was Purged so violently, that we were afraid of a mortal *Hypercatharsis*, but it did not give the Mother one Stool.

XIII. In Children it is always safer to give Purgatives in too little, than in too great a quantity, because, if it do not work in a few hours, more of it may be given the Child, and so we may try the strength of any Medicine in any body without danger. For as it fares with old people, so it does with Children, all are not purged alike easily, quickly, and plentifully by every Purge: for which reason, lest any mischief should be created them by a strong Medicine, it is better to give the most gentle Purge at several times, and a little at each, than all at once. For the Physician cannot be too cautious; because, if ever, certainly about Infants

Sylvius de le
Boë.

we may not make two mistakes, seeing they are delicate, and quickly perish.

XIV. It is to be observed, that Children are averse to all sorts of Medicines; therefore, as they are averse to Medicines, so we must try all our skill to make them take them: I speak of Medicines taken by the mouth, because they easily admit of outward things. The way of forcing Children is shewn by *Paulus*, lib. 4. cap. 55. where he mentions the Instruments that must be used to force Children: and they are a Spoon, which first is forced between the Teeth, to keep them firm together; and then a large Pipe, which is small at one end and wide at the other. This is thrust with the narrow part into the Mouth to the Jaws, and Medicines are poured in at the broad end, and so whether they will or no, they must take the Physick.

Mercurialis.

XV. There are two things in Physick which grievously perplex me, in which I am greatly straitned, am full of difficulties, and almost fumble, to wit, when I have Women with Child, and Children, under Cure; for they cannot express, where, nor what their pain is, nor any thing else. And it is very true what *Galen* 2. de Alimentis speaks out of *Plato*, That Children are the most intractable of all wild Beasts.

Ferdinandus

Ani proidentia, or, The falling out of the Arse-gut.

XVI. If the falling out of the Arse-gut be with Inflammation, in stead of blood-letting we must use Cupping-glasses, and also frictions; but if the Child be of any age, scarifying may be used. Besides, the Child must be gently purged: But if we give a strong Purge, without doubt a greater Inflammation will be raised in the going out of the Excrements. In this case therefore we must see to keep the belly a little loose, and the body should rather be purged by Urine than by Stool. And for a Diuretick I would recommend half a pound of Whey well clarified, and an ounce and an half of juice of Melon-seeds: For this Medicine will purge especially by Urine, and if it give a Stool, it will do it gently, and without any griping.

Mercurialis.

XVII. Powders and Oils keep the Arse-gut from falling, as, Take of Oil of Myrtle, and unripe Oil of Roses, let the Anus be anointed herewith, then strew on a little of this Powder; Take of Ceruss, Antimony, Galls, Alame, each three drachms, powder them and apply them. This Powder is commended by *Rhases*, and I have found it very effectual: But we must observe what *Aetius* admonishes, that in Infants and young Children we must not use these Powders, especially the Astringent and more efficacious, because they greatly exasperate and cause pain; wherefore, unless the Child be well grown, we must not use the foresaid powder. There are several Medicines 9. n. r. too violent for young Children: Therefore I rather commend *Galen's* advice, 3. *Euporist*. that is, to use Smith's-water, and Powder of burnt Snails.

Idem.

XVIII. The same *Galen* 2. de Simpl. writes, that several have written, that a *Torpedo* applied is good for the falling of the Arse-gut: But he subjoyns, that he had tried that remedy in vain. Powder of a Serpent's slough is also very good.

Idem.

XIX. But if these Medicines will not perfectly cure it, the followers of the *Arabians* commend the making of two cauteries in the end of the Spine; that is, near the Rump, one on each side. Which remedy nevertheless I would advise onely to be used in adult ones, and when other things will do no good.

XX. It is often hindred from going back into its place by the *Mucus*; wherewith it is covered, which you must absterge, not with brine, as some have advised, because the sense of the part will not bear it; but with Sugared-water, especially with Rain-water, or with Water of Honey much

diluted, which you must doe often, and wrap up the Anus in clothes wet with water.

Aphthe, or, A Thrush.

XXI. Because a Thrush is usually attended with great Inflammation, and consequently draws the humours from the body, and increases the disease thereby: Therefore it will be good to apply Cupping-glasses, but to the buttocks, or the end of the back, by which one may evacuate as much blood, as the age and habit of the body will bear.

Mercurialis.

XXII. If the Thrush be malignant, we must oppose the pravity; but we must have regard to the Age and the tenderness of the body. We may not therefore in this age use those remedies, which an elder might bear. And the Medicine may be such; Take of *Scordium* finely powdered 1 drachm, Pomegranate Pills finely powdered 2 scruples, burnt Alum 1 scruple, Honey what is sufficient. Mix them.

Idem.

XXIII. But we must observe, whether powders, or whatever else be given, it is necessary that it be mixt with some thing that is gratefull to the palate, for there the Gustatory faculty is placed, and we must have great regard to the Taste; Wherefore, as may be seen in *Galen* 6. de Med. local. the Ancients made up their Medicines for the Thrush either with *Sapa*, or Honey.

Idem.

XXIV. If the Child be big, because it is very material to have the pravity checkt presently, lest it grow to spreading Ulcers, we must endeavour to take away all malignity immediately with strong Medicines, which the juice of Pomegranates, and especially of sowre ones, does admirably. Which, *Theophrastus* says, does in a wonderfull manner preserve from putrefaction. And though the Pomegranate, by *Dioscorides*, be called *ἄσπερον*; yet we must not say with *Ruellius*, it is hurtfull to the mouth, which is very false, but that it is ungratefull. It appears indeed from experience, that it is unpleasant and ungratefull, nevertheless it is very good to stop a putrid Thrush.

Idem.

XXV. But it often so happens, that this Medicine does not suffice, wherefore we must proceed to stronger. In which case, in those of elder years, we may use either *Aqua Aluminis magistralis*, or *Unguentum Egyptiacum*, or *flos aris*, corrected with *Diamoron*; all which things must not be used but upon great necessity. The reason is, because according to *Galen* 6. n. r. in the palate there are two wide passages, one of which goes to the Lungs, the other to the Stomach; wherefore it is very dangerous, if any poisonous Medicine get into these parts. Therefore he said, that Vitriol must not be used in Medicines for the Mouth; because of the imminent danger, if any part of such a Medicine should get either into the Stomach or Lungs. Besides, when we must use some such Medicines, it will be best to use them in such a form, as cannot go farther than the Palate, as when a malignant Thrush is touched with Oil of Vitriol, or of Sulphur, or with Sublimate water.

Idem.

XXVI. Whether is Butter good for a Thrush? It is good in the beginning; but it may be questioned, 1. Because fat things make Ulcers foul. 2. By its heat it might increase the Inflammation. 3. It does not at all agree with other Medicines, which must be used in the progress of the Disease. I answer. 1. The argument holds good in deep Ulcers, which must be deterged. 2. Fresh Butter is reckoned temperate, because of the serous humidity mixt with it. 3. Nor does it hinder, that other Medicines are of other qualities; because in the progress we dry and deterge more.

Horstius.

XXVII. A Boy about four years old had a very sharp Fluxion upon his Tongue and Jaws, so that he had an infinite number of white Ulcers, very painfull, with a great inflammation; he could swallow

low

low nothing, he had no sleep, but roared continually, he was lean, and almost quite consumed. Honey of Roses, with Spirit of Vitriol, which did others good, did him none. He had a plentiful Loosness, with much porraceous bile. A Blister did him much good, but his pain and roaring continued, and a ferous sharp humour ran out of his mouth continually, the pain and inflammation drawing more and more. At length I gave 1 grain of *Laudanum* in broth, whereby the pain was eased, a gentle sleep procured, which afterwards continued moderate, and came at due hours. Then his fluxion into his mouth ceased, and he began to recover.

Riverius.

Atrophia, or want of Nourishment.

XXVIII. There are four causes of Leanness in Children; First, Ineptitude of Aliment. Secondly, Want of Heat, whose office it is to concoct it. Thirdly, Obstruction of the passages, by which the Aliment passes to its elaboratories, or whereby it is carried from them to the parts to be nourished. Fourthly, Any cause, that is able to waste, dissipate, and melt the fat and flesh. To the ineptitude of Aliment, the condition of the Milk belongs, which is either afforded, in far less quantity than it should; or is so thin, that it is dissipated by the heat; or of its own nature, it is of little Aliment, because it has but little of the butyrous substance, and much of the other; Or when it is bitter, salt, &c. which Nature is therefore averse to. So, want of Innate Heat causes an Atrophy a thousand ways, because it is able neither to concoct laudable Aliment, or if it be, it does not distribute it, or does not assimilate it, when distributed, &c. Thus Childrens bodies are also emaciated, because the ways, channels and pores of the Elaboratories, and the Flesh, are obstructed, corrugated, fallen flat, compressed, or some way or other straitened. Of which cause we must have a great care. Then the cause which wastes the fat and flesh, is either internal or external; internal, whatever is unable to contain the substance that should nourish, as it happens in fluxes of blood, or of any other good substance: or it dissipates by sweat, insensible transpiration, by Urine or Stool. But these are seldom seen in Children; for in them the dissipating heat, or consuming drought usually waste the humidity that should nourish. The external cause is, either the æstuating dissipating heat, or the violent cold extinguishing the heat, or the use of Salt meats.

XXIX. If the heat appear as it were extinct by a cold disease or humour, then indeed Children are usually very hungry (although sometimes their stomachs are squeamish, that is, when Phlegm putrefies, or becomes mucilaginous) and the more they cram, the leaner they grow: Moreover, they are of a white colour, and though their body be extenuated, their eyes, face and feet swell, being forerunners of another mischief. You cannot heal this disease by change, or increase of diet, but by such things as waste and concoct the Phlegm, and make the heat more brisk. In which case, it is good for Children, when they are weaned, to take a very little Wine, with Biscoft-bread, or in drink, so it be much diluted, for it concocts phlegm, and crude juices, corrects the cold intemperature, and excites the heat. Aromatics are also good, which, if they cannot be given a sucking Child, you mix them in all the Nurses victuals: for they thin the Milk, and make it pass easily.

XXX. There is a Disease very frequent in these Countries, in which Children, that suck, and those that are weaned, are consumed with an Atrophy to a *Skeleton*, onely the Belly (as if there were a soft *Parachyma* lying underneath) being swelled, and so far like the Rickets (but that there is not such a tension of the joints) and for the rest it comes

without any concurrence of Worms, or of any other cause, but onely through some fault in the radical ducts and glands: For the method and cure of the common Consumption turning to an *Atrophie*, of a Tympany, and the like Diseases, sometimes used in this case has not been sufficient. Not yet afterwards have the remedies usually prescribed in a more accurate method for *Schirrhi* and abscesses of the mesentery (which indeed are rather the products of the inveterate Disease) Laxatives, Purgatives, Aperients and Strengtheners, and external Anointings, Bathings, &c. been found to satisfy expectation, or to hinder those that are so held, from being carried off at last by an Hæctick, with a supervening Epileptic, colliquative Flux, Lientery, and other Symptoms. Within these few years a little Daughter of N. was brought to me, than whom, in all my practice, I have not seen one more Consumptive; she had taken an infinite number of Medicines. Being much intreated, and the case being desperate, after I had given the Prognostick, I happened, I know not how, upon *Tinctura Martis aperitiva-Vitriolata*, and upon *Arcanum duplicatum*, which, it may be, might go nearer to the root of the Disease, than any usual things, for all their known energy. Therefore we gave, for the first week, every day, and for the next, every other day in the morning, 2 drops of the Tincture for every year of her age; and, at 4 a clock in the afternoon likewise, for every year of her age, 1 grain of the *Arcanum*. And so in a few days she began to be better in plight, and, in a short time after (Nature recollecting her self, of her own accord) she was perfectly restored, and is at this day brisk and corpulent enough. After which Observation, being farther confirmed by reason, I have, after that, to this very day, cured several in the same manner, without the help, almost, of any other Remedies. And this Martial Tincture is made of Vitriol of Mars (made with Spirit of Wine) and of the Acid of Tartar, each 4 ounces, boiled sufficiently in 3 pounds of steel water, and insensibly exhaled in stirring, to the thickness of Honey, which, by pouring on 3 pounds of Spirit of Wine, is dissolved by digesting, little sediment (if all things have been done as they ought) being left. And so the liquor is saturated, and after little or no abstraction, or exhalation, is set by for use, and it may be farther tinged, if you please, with essence of red Popy. You may have *Arcanum duplicatum* in *Schroder. Pharmac. l. 3. p. 474.* and *Hofman. in Clavi. p. 344.*

XXXI. A Boy two years old was brought to me, Anno 1567. the Son of Mr. David Merueilleux, Counsellor to the most Serene Prince of Longeville, my intimate Friend, consumed with a great Atrophy, together with a Loosness. His Breast was diaphanous, if it were held to a Candle. He was given over by all, especially by a City Pastor, who practised Physick. I believed he was not desperate, because he had a liveliness in his eyes. And he was recovered by taking Milk, in which red-hot Flints had been quenched, adding Sugar of Roses, and a little *terra sigillata*. Within a month he throve upon it, now he is a lusty Man, and follows the Wars.

XXXII. Sometimes Childrens Atrophy comes from Worms, which are bred under the Skin in fleshy parts, of corrupt nutriment. This is an approved cure; Take 1 ounce or 2 of Bryony-root: boil it in Lye of Oakashes, till it grow like pap. Anoint the Body of the Child with this, either in a stove, or in some warm place, then the Worms put out their heads at the pores, and then presently the Skin must be shaven with a Razour, for so the heads are cut off the Worms, and the cause of deficient nutrition is removed. And this operation must be performed once and again, namely, till it be evident, that all the worms are gone. Then the Children must be bathed often in Bathes of a decoction

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251.

cotion of a Sheep's-head and Feer, Mallow, Marsh-mallow, Pellitory and Linseed, &c.

XXXIII. And there are not wanting some, who affirm, that Women-witches suck children lean. In which matter, which I leave for others to discuss, it is enough to know that they are emaciated, because we find children are bewitched, because perhaps they are infected with the Touch, Sight and Breath of some infected, maleficious Body. For their tender bodies are easily made worse by any thing.

But how comes it to pass, that a beautifull and healthy child presently grows worse, discoloured and lean? You must know, that such a sudden change may happen in children, either, because the child by its innate principles, is at the very perfection of health, according to the indigence of its Age, beyond which it cannot go one degree, nor continue in the same; then it must needs go into a worse state. At which time, I think, we should use no Remedy, but it may be hoped that by a good moderation of life and diet, he may be brought to the utmost extent of Age which he is able to live, while Nature grows stronger, and the body arrives at a more solid state by the same action of Nature. For so it happens to us all, while we commit no error in our life; otherwise that alteration is a fore-runner of some Disease at hand.

Or again, the foresaid change of a sound into a morbid body proceeds from the breath, or from the depraved spirit and aspect of the eyes, permeating, dissipating or infecting, or any other way changing the very tender substance of the Child. At which time, if any thing superstitious or maleficious come from the wickedness of the Devil, the Assistance of Holy Church being first desired, we must proceed to such Remedies as may dissipate, dissolve and weaken the breath, wind, or foul and contagious spirit. For which purpose, it is a vulgar practice, and confirmed by reason, to fly to Fumigations; Some of which strengthen the principal parts and the whole body, and prevent Childrens being hurt by bewitching Vapours; such are all Spices almost, and things of a gratefull smell. Others waste, dissolve and dissipate the bad exhalation, humour, wind or spirit. For example, odoriferous Wine, *Lignum Aloes*, Rose-water, Baytree, Juniper, Mastick, Rue, &c. which by the actual heat of the fume do dissipate, by the potential attenuate, by their smell obscure and weaken the strength and power of the exhalations, and whatever it is, whether substance or quality, which weakens the Child. Whence it came to pass, by the advice of the Ancients, and experience a thousand times confirmed, that Nurses defend and cure their Children of these fascinations by frequent fumes. Again, other fumes are written of, as Exorcists experience, to drive away witchcraft, and to cast out evil spirits. *Aetius*, *serm.* 13. *cap.* 119. describes the fume called *Berenices Suffumigium*. In *Tobias* there is one of the heart of a Fish to drive away the Devil *Asmodeus*. Of this nature are both foetid and strong smelling things, Frankincense, Myrrhe, *Stirax*, *Ladanum*, *Galbanum*, *Asa fœtida*, Rue, &c. How far these things drive away evil Spirits, is no disquisition of mine, it is sufficient to advise to join Sacrifice and Prayers, which are the best Incense and the most efficacious Fume to destroy Witchcraft. Anointings also are of great force in the foresaid fascinations, with Oil Olive, of Sweet Almonds all over the Back, Belly and Limbs, with a little odoriferous Wine. Among several things Rue, *St. John's-wort*, Seed of herb *Parry*, *Pæony*, Sulphur, &c. are commended. (See *Tit. de Venenis*, BOOK XVIII.)

Aurium Dolor, Inflammatio, or, A Pain, or Inflammation of the Ears.

XXXIV. Pain in the Ears uses to be so tough and grievous, that there will be a necessity of proceeding to Chirurgical operations; Therefore, if the Age will bear it, to divert the matter which the Pain draws, it will be convenient to apply Cupping-glasses, first to the Buttocks, and then to the Shoulders. And sometimes in extreme Pain I have known Issues made in Childrens Heads do much good; both because the Flux of the matter to the Ears is retarded, and because the very moisture of the Brain, which otherwise would run to the Ears, is almost consumed by the Issues.

Mercurialis.

XXXV. It must be observed, that Water must never be poured into the Ears, though they ake never so much; because Water is very hurtfull for the Ears. Wherefore *Aristotle* said, that Divers, when they must dive under the Water, put Oil into the Ears, that they may not be hurt.

Idem.

XXXVI. It is to be doubted, whether the White of an Egg be good in an Inflammation of the Ears; because, 1. It has a repellent virtue; 2. It hinders the expulsive faculty; 3. The matter producing the Inflammation being hot and moist, does rather seem to require dissolving things. But, seeing the violent pain of the Ears does necessarily require some lenient thing, we approve of the White of an Egg mixt with Woman's Milk, in which we grant there is a little repellent faculty, having regard to the great Afflux, which, by reason of the continuance of the Pain would otherwise be. And we grant, that where the matter is little, the expulsive faculty must not be hindered: but where the Afflux is great, we must have regard not onely to the Humours affluxed, but to those that will be affluent. By which reason the third objection is answered, where the matter settled in the part indicates dissolution and attenuation, but not that which is still in fluxion.

Horrius.

Catarrhus, or, A Catarrh.

XXXVII. *Paulus*, *lib.* 1. *c.* 7. whose Authority *Avicenna* produces, writes, that it is good to consume the Moisture of the Head, if warm water be poured on childrens heads, as if this were the most effectual Remedy to put an end to Distillations and Coughs of children. But, with *Paulus* and *Avicenna's* leave, I cannot approve of the advice, because the pouring on of warm water, if it be too hot, does harm, for it dissolves the matter more, and violently strikes the weak senses of the child: And if it be but warm, it is clear, that it farther relaxes and moistens, and consequently increases the sickness. But I think *Paulus* was deceived by misunderstanding the meaning of *Hippocrates* and *Galen*, who, *5. Aphorism.* 22. said, that pouring warm water on the Head cures a *Κεφαλαλγία*, meaning the Headach: Where *Galen* says, that pouring warm water on the Head, dissipates and consumes the Moisture, which causes the Headach. But it differs much to cure the Headach, especially in Men; and to cure, either a Cough, or the Headach, or Difficulty of Breathing in Children. Wherefore, if any thing should be applied to the Head in this case, such things must be applied as gently exulcerate the Skin. For as we see Ulcers spontaneously arising in childrens heads do preserve them from such Ails, so it is consentaneous to reason, that Ulcers raised by Art may doe the like.

Mercurialis.

XXXVIII. A Boy eleven months old had a Catarrh with a continual Cough and Fever: He frequently vomited Phlegm, he sucked much Milk, and pissed little. After many Medicines tried to very little purpose, I ordered that the Region of his Kidneys should be anointed thrice a day with *Oleum*

Scorpi.

Scorpionum Matthioli, which made him make much water, and the Catarrh abated. For *Mercatus*, lib. de Morb. pueror. says, that a Catarrh in children comes sometimes from some fault and weakness in the Kidneys, which do not draw the ferous humour, whence it comes to pass, that it being translated upwards, becomes the matter of the Catarrh. If that Symptom had continued, the means propounded by the same *Mercatus*, for the stoppage of urine in children should have been used, as Clysters, opening

Riversius.

Broths, &c. *Claudicatio*, or, Leanness.

XXXIX. Children, though they be exposed to infinite other Dangers, yet their condition is especially miserable in this, that the heads of their bones, chiefly of the Thigh-bone, part and separate from the rest of the Bone, sometimes upon a slight occasion. That this conjunction is very lax in Infants and young Lambs, &c. if you boil them, the thing it self shews: for the *os pubis* may be parted from its *diapophysis* with a small impression of the fingers ends onely. If the Parents be negligent, and those that look after them, put them too soon to their feet, it gives great occasion to this mischief. In Children and Youths oftentimes the same separation of the head of the Thigh-bone from the neck of the bone happens, and it is commonly taken for a disjuncting. This error in Diagnosticks often hinders the cure, and costs the Patient dear. In both cases indeed extension is necessary; but it were far better to know the very truth of the matter, and by judgment to comprehend it.

Rolinsecius.

Convulsio, or, A Convulsion.

XL. Let no man wonder, that I persuade to Bleeding of young children, since Blood, as far as ever I could observe hitherto, may as safely be taken out of their Veins, as out of old peoples. And indeed it is so necessary, that without blood-letting we cannot certainly cure some Symptoms which befall children; for example, How can we cure childrens Convulsions, when they are breeding their Teeth, which come upon them in the ninth or tenth month (with Swelling and Pain in the Gums, when the Nerves are pressed upon and irritated by the Teeth, whence these Symptoms arise) without letting of blood, which alone is far to be preferred in this case above the most famous Specificks that are yet known: Some of which doe harm by their adventitious heat, and while they are believed to oppose the Disease by some occult quality, they militate against it with their manifest heat, and kill the Patient.

Sydenham.

XLI. It is incumbent on us to prevent Convulsions in children, or to cure them as they are beginning; For if the former children of the same Parent have been subject to Convulsions, that mischief must be prevented in them that are born afterwards, by the timely use of Medicines. To this end it is usual to give the child some antispasmodick Medicine as soon as it is born; some give it a few drops of the purest Honey; others, a spoonfull of Canary-wine with a little Sugar; others, a spoonfull of Oil of sweet Almonds; others, one drop of Oil of Amber, or half a spoonfull of Epileptick Water. Some within three or four hours after the child is born make an Issue in the Neck; then, if it be of a fresh colour, they draw one ounce and an half or two ounces of blood from the Jugulars by Leeches, having a care that it doe not bleed while it is a-sleep. Let the Temples and Neck be gently rubbed with such an Ointment; Take of Oil of Nutmegs by expression two drachms, *Ol. Capivi* three drachms, Amber one scruple. Hang a piece of Elk's hoof or Pæony root about the Neck. The Nurse must take Antispasmodick Medicines constantly.

Willis.

XLII. But if an infant be actually taken with a Convulsion, because Issues operate but slowly and little, it is expedient to make a Blister in the Neck, or behind each Ear; and, unless a cold constitution hinder, Blood must be taken from the jugular Veins, by Leeches. Liniments must be applied to the Temples, Nostrils and Neck; and Plasters to the Feet. Clysters, which may loosen plentifully, must be given every day. Every sixth or eighth hour specificck Medicines must be taken inwardly. *Untzerus* highly commends the Gall of a sucking Whelp, taken in a little Linden-flower-water. A Learned Physician told me, that he has known several cured with this Remedy.

Idem.

XLIII. When Convulsions proceed from difficulty in breeding of Teeth, as this Symptom is secondary, and not so dangerous, so in the Cure our chief and principal aim need not be directed to it; but sometimes we may be solicitous for easing of Pain, and for removing the febrile intemperature. Wherefore both the Patient and his Nurse must use a spare and cooling Diet, the Gums, where the Teeth are coming out, must be rubbed or cut open; and when the parts are swelled and pained, Anodynes must be applied, Clysters and Bleeding are often proper in this case.

Idem.

XLIV. Sleep must be procured, and the raging of the Blood laid; In the mean time Antispasmodick Medicines must be used; but temperate ones, and such as do not disturb the Blood and Humours. Blisters, because they evacuate the Serum that is apt to be poured into the Head, often give relief.

Idem.

XLV. When children are taken with Convulsions, neither presently after they are born, nor upon their breeding of Teeth, but upon other occasions and accidents, the cause of such an Ail does usually reside in the Head, or somewhere about the parts of Concoction. When there is a suspicion of the former (as usually it appears from signs which argue, that too much ferous matter is gathered about the Brain) the Remedies beforementioned ought to be given in a little larger Dose. Moreover, such as bear Purging well, may sometimes take a Vomitt or a gentle Purge. Wine and Oxynt of Squills, also *Mercurius dulcis*, Rheubarb and Refin of Jalap are of great use.

Idem.

XLVI. When the cause of the Convulsion appears to be in the Bowels, or when Worms or sharp griping Humours are found to be in fault; for the Worms a Purge may be given of Rheubarb, or *Mercurius dulcis*, with a little Refin of Jalap. Formerly I gave a Boy that was strongly afflicted with Convulsions, who was ready to die, a Dose of *Mercurius dulcis* with Refin of Jalap. He had four stools, and voided twelve Worms, and quickly recovered.

Idem.

XLVII. If we suspect that the Convulsion proceeds from the irritation of the Stomach and Guts by sharp Humours, we must either purge or vomit gently, or doe both one after the other. To this purpose gentle Emeticks must be given of Wine of Squills or Salt of Vitriol; if the Patient at any time have an inclination to vomit. But if you shall rather think fit to purge, an Infusion or Powder of Rheubarb, Syrup of Cichory with Rheubarb, or of Roses with Agarick, must be given. And I have often seen the Convulsion cured in children, by giving these Medicines in time. Moreover, in this case, Clysters must be given frequently. But we must not omit to apply external Medicines, Fomentations, Liniments and Plasters, to the Belly.

Dentitio, or, Breeding of Teeth.

XLVIII. Experience testifies that a Hare's Brain is good to breed Teeth: for by its coolness it helps to temper the heat of the Gums, and by astriction strengthens those parts; perhaps it does it by a specificck property: but it may be doubted, because here a hot attenuating virtue seems rather requisite, than

than

than a cold astringent one, since the coming out of the Teeth would be helped thereby. I answer, That things temperately cold, and moderately astringent, do strengthen Nature, so that the Heat having thereby got a temper, may more commodiously perform its operation.

Horstius.

XLIX. *Strobelbergerus, lib. de Dentium Podagra*, mentions a certain bastard Dentition, when some Swellings bunch out in the back part of the Gums, when children make a noise and sibilation as they suck the Milk. The Physician may be ascertained of this spurious Dentition, if he press the child behind the Ear with his finger, for it will presently cry out for Pain. This Evil wants not danger, the best course to get it away, is, to anoint often the external region of the Ears, especially behind, with Hare's fat, and the Gums frequently with Oil of sweet Almonds.

L. It often happens, that all Medicines do no good, because of the hardness of the Gums, or the weakness of the Child. Therefore in such a case, before mortal signs supervene, I would advise the Chirurgion to open the Gums with a Penknife, where the Teeth swell, to make way for the Tooth, and to ease the Gum, which Remedy I have tried with good success in several of my own children. This is better, than as the Nurses doe, to scratch and tear the Child's Gums with the Nails. The Duke of *Nevers* had a Boy who lately died at eight months of age: when I, with the Physicians who were there, did narrowly enquire into the cause of the Patient's death, we could find no other but the excessive hardness of the Gums, which was not meet for that Age; for so the Teeth could not make their way: Of which opinion this was an Argument, that when we had opened the Gum with a Penknife, all the Teeth appeared ready to cut, only they wanted a little of this help.

Parac.

Diarrhaea, or, A Loosness.

LI. I had a Boy about three years old under cure for a long and desperate Flux of the Belly, sometimes dysenterick, sometimes lienterick, for which I used many things both internal and external, but in vain. At length, when there was little hope, and the Mother was brought to bed again, I persuaded her to put her new born Daughter to another Nurse, and to give her Son of three years of Age suck again. She followed my advice, and the business succeeded so well, that, by degrees, the Loosness stopt, and he recovered his strength, so that now he lives lusty and well.

Hil Janus.

LII. Sometimes childrens bellies are loose from the corruption of Milk, which degenerates into a porraceous or green colour: In which sort of Flux, though it may be questioned, whether it may be stopt, because it looks of such a colour as is reckoned altogether preternatural; yet we must not think so in children, since the Greenness proceeds from the roasting heat, which portends always destruction, but from the quality of the Milk and mixture with a bilious Serum. Wherefore the Loosness must not be stopt, but the Stomach must be strengthened, and alteration must be made. ¶ Because sometimes fowre green excrements use to come from children, with or without curdling, we must consider, why such things appear in children, and smell so fowre, when they are otherwise well? Since it is certain that the Greenness in them comes not from adustion, as in hot Diseases of the Liver and Veins. I am bold to affirm, that the greenness comes from cold, but not from cold matter only, but from heat and cold, that is, from a bilious and a pituitous matter. For oftentimes such excrements appear in children which have a hot Liver, and breed much Bile, and a cold, raw Stomach, which causes that fowreness in the excrements: For it is certain, that neither the greenness nor fowreness can

Mercatus.

come from Bile alone, and therefore Bile comes from the heat of the Liver; nor do they come only from Phlegm and crude Milk, but from both these together, with Bile going altogether into the belly, and by the natural heat of the belly the corruption of the white Milk and yellow Choler, being matter unfit for Chyle, a corruption is made, which degenerates into an excrement of a green colour. ¶ *Sylvius* derives these green stools from an acid sharp Bile turning green, which change of colours is no strange thing to Diets. And, he says, the green colour is owing to an acid, partly by reason of the fowre smell, which always attends it; and partly from the change of the Bile into a green colour by some Acid. And he places that Acid in the Pancreatick Juice, contrasted partly from the bad Diet of the Mother, and partly of the Nurse. He places the Cure in the correction and tempering of the Acid.

Quassatio vertebrarum Dorso, or, A Wrenching of the Back.

LIII. *Galen, 3. de Artic. text. 2.* reckons up four Luxations of the vertebrae of the Back; among these he reckons *stasis*, that is, a wrenching, when the joining of them is loosned, they remaining in their places. They that are troubled with this, complain of a Pain in their Back and their Stomach, their Appetite is gone, some People Vomit, their Head akes, a febrile Heat takes them, yea oftentimes a violent Fever, equal in Symptoms to a malignant one. The cause is imputed to the Mother's carrying some great burthen, or inordinate motion of her Spine. This is their way of cure in *Germany*; They set a piece of Wax-candle lighted to the childrens Navel, and set a Pot upon it, like a Cupping-glass, and they let it stick there till it fall off of it self.

Sennertus.

Epilepsia, or, The Falling-sickness.

LIV. Most children have abundance of bilious meconium when they are born, which I use carefully to purge, otherwise the following nutriment is corrupted, and Milk is coagulated, whence come Gripes, and because of malignant Vapours arising, an Epilepsie follows. If this connate excrement be rightly purged either by the Strength of Nature, or by Medicines, children are preserved; but if not, they are either troubled or killed with an Epilepsie. I use *Syr. Ros. mosch.* or *Elect. de Manna*. ¶ *I Rager, Misc. contr. p. 996.* have seen children taken with an Epilepsie; together with Gripings and green stools. This was helped not by Antepileptick Powders, nor by searing the hind part of the head; but by cleansing the first ways with *Mel. rosar. solut.* and Syrup of Cichory, with a few drops of Spirit of Vitriol.

LV. For childrens Epilepsie the *Italians* burn the head behind, and make an Issue there for evacuation of the humour. *Celsus, l. 3. c. 23.* approves of it, and *Rondeletius*, because it may doe good in an Idiopathic one, but not at all in a Sympathick one. Others, as *Sennertus*, disapprove of it, because of the Pain it would put the tender bodies of Infants to, which therefore can neither well bear Purging nor Bleeding. But the case is not the same: for Catharticks exert their violence upon the Bowels, and by their malignity may easily hurt the substance of Infants, which is easily dissolved. But Causticks are only once applied to the external parts, and evacuate the noxious humours slowly, without great pain. ¶ As well for the cure as prevention of this Primæviæ Disease. Physicians have found a present Remedy, Burning of the Head behind, which, as it is very safe, so also it evacuates the troublesome Phlegm, and makes revulsion, interception and derivation of it, with manifest benefit. For the said inuision (though *J. B. Sylvaticus, contr. 87.* dissuade it) is so frequent at *Florence*, that very few children can be found, who have not undergone it. Having therefore shaven off the Hair behind, let an oval, oblong Iron,

answe.

answering to the hole behind in the *occiput*, be made red hot, and, for prevention, in children let the cavity be gently touched: But, for the cure, it may be set harder on, in the very fit; and when the Ulcer has been kept open several days, it may be so done twice or thrice.

Sculetus.

LVII. And that you may know when and how to use this wholesome Remedy, Know that it is good for those children, who have had an Epileptick fit of any long continuance, and when there has preceded a sensible preparation to it. Secondly, It is convenient, without tarrying for the first fit, in them that carry a hereditary Character, to make an Issue; for the urgency of the Disease requires it, and (when it has contracted a habit) the severity of it; for afterwards it is cured with difficulty, and an Issue does little good: and also the tender substance requires it, which even from one fit contracts an habit.

Mercatus.

LVII. But, for the right use of this Remedy, you must remember, that when there is onely some small epileptick affection, concerning which it may be a question, Whether it be epileptick, or arise from Fainting, it is not proper to use this Remedy presently, and it were a rashness to open the Head immediately: 1. Because if there hath been no previous affection in the Head, that requires this Remedy, it were erroneous to doe it, onely for fear of an uncertain event. 2. Because Physicians, who use this Remedy, are bound to keep the place open, the greatest part of their Patients lives. The reason is, Because what expires and is purged by it at that time, is either an epileptick Apparatus, which we know in three or four years time is wholly purged out, a new one breeding like to the found part of the Head, which being bred, we may safely close up the Issue. But if there be none of this Apparatus in the Head, it is evident, that that onely can be purged, which results from the natural cohesion of the Brain; and because this breeds all ones life time, it is necessary that the Issue continue as long: If you close this up, you may certainly conclude, that Epilepsies, Apoplexies, Convulsions, Palsies, &c. may easily breed; or, that those excrements may fall upon the Breast, Stomach or Heart, as we find by certain experience.

Idem.

LVIII. An Issue must also be made with the hand of a skilfull Artist, for I have often observed from an inextrous way of making an Issue in the *occiput* a thousand mischiefs and death has followed: for if the Chirurgion try to burn all the Skin with the Iron, I have often seen a Convulsion follow, and the child die of a most cruel death: And if that do not follow, if the hole be made too wide and deep, a fluxion is raised to the back and nervous parts, whereby the children grow crooked: for he that would use this Remedy with security, must consider, that it is enough to burn part of the Skin for the cure and prevention of it in children: for it is sufficient, that the Head be purged by the cutaneous Veins, without having any thing to run at the greater and deeper Veins of the Head, whereby it is often weakened, and made liable to a thousand disasters. Besides, that when we would close the Issue, it may be done without any danger, whereas it is quite otherwise, when it is made deep.

Idem.

LIX. Among things that cure several Symptoms in the Epilepsie of children, Aniseeds may be reckoned for one. For seeing most of their Diseases, especially the Epilepsie derives its original from Phlegm, Wind and Worms, this Seed deserves great commendation, because by its aromack virtue it cuts Phlegm, dissolves Wind, and kills Worms with its Acrimony. It may not therefore without benefit be mixt with childrens Powders.

Grube.

LX. For they must not be heeded, who without distinction commend Powders of mere Astringents, Coral, burnt Hart's-horn, Crabs-eyes, Man's-skull, &c. though these by their astringent virtue

strengthen the weak parts in children, and so doe much good; yet we must have respect to the cause, which makes children subject to frequent Catarrhs and Coughs. Which things being so, I use the following Powder, the use whereof I have often experienced, giving a few grains, according to the Age; Take of burnt Hart's-horn 1 scruple and an half, Powder of root of Peony, Florentine *lin*, Aniseeds, each half a scruple; hoof of an Elk prepared 4 grains, Oriental Bezoar-stone 3 grains, Magistery of Man's-skull, Crabs-eyes, each 1 grain, a little Sugar: Mix them.

Idem.

Febris, or, A Fever.

LXI. I judge, that all the time of sucking, if blood must be drawn, it must be done onely by Scarifying, and no other way, till the child be three years old. And if the child be weaned before that Age, you must rarely cut a Vein, unless the child be one of those that *Celsus* describes for strong ones, or if the Disease be a Quinsy, Pleurisy, or some such dangerous one.

Mercatus.

LXII. Both the inconvenience of pain from Scarifying, and of loss of strength by opening a Vein, may be avoided by applying of Leeches. But neither do they want danger; for besides that according to *Walaus* his opinion in *sua methodo med.* they draw arterious rather than venous blood, it is a very hard thing to stop the Bleeding; so that Physicians, who prescribe them, do always order a small quantity of blood, because oftentimes the bleeding exceeds, against their will. I experienced this in my eldest Son, whom I bled with Leeches in a burning Fever, when he was about four years old: In the morning I set about three to the bending of his Arm. The blood seemed as if it were stopt: But in the night it burst out again in such abundance, that he was almost drowned in it, which weakened him so much, that I gave him up for dead. It could scarce be stopt with the mixture of the white of an Egg and Carpenters riddle which I took up one day, as I was walking. But by God's blessing the event proved well: for the next day his Fever left him; but he looked pale for several days.

LXIII. In the months of *July*, *August* and *September*, a great number of sucking children dies, which the Women hold to be ill of Worms. But I maintain that their death proceeds from the sharpness of the Nurfs milk, whereby the Stomach is inflamed; for there is coldness of the extreme parts, unquenchable thirst, great anxiety, squeamishness, vomiting and looseness; Wherefore a Vein must be opened: then apply to the region of the Stomach a Cataplasim of Barley-flower, boiled in Goat's-milk, with a little Juice of Nightshade, and Oil of Roses. The Nurse must be changed, and Mucilage of Seed of *Psyllium* must be given with Sugar of Roses: Chicken-broth altered with Purslain, Sorrel and Lettuce: Also the Heat must be drawn outwards, by applying Animals split in the Back.

Pachecius obs. 56. Riv. com.

LXIV. If a lingering Fever arise from Obstructions, there is nothing better, according to *Montanus*, *conf. 10.* than an Infusion of Rheubarb in Endive-water. He says, he never met with a Fever from obstructions, which was not cured with this Remedy, if the use of it were constantly kept to. The Infusion of Rheubarb, now in common use, is made of half a drachm, or a drachm of it, grossly bruised and tied in a bag and infused in two or three pounds of Spring-water cold for a day. The use of it may be continued a month or more, according to the contumacy of the Disease.

LXV. We must not give Spirit of Vitriol, Sulphur and the like to sucking children in Fevers, or any other Distempers, as we find them commended by Practitioners in their Books; seeing by taking them Milk is curdled in the Stomach.

Hormannus

U u Hydrocephalus

Hydrocephalus, or, The Dropie in the Head.

LXVI. In an *Hydrocephalus*, if abundance of water be gathered without the *Cranium*, the use of Medicines both internal and external is usually vain: for as strong internal Medicines are not proper for this age, so moderate or weak ones doe no good, the case is the same in externals. Wherefore we can have no hopes in any thing but in a sensible evacuation of the humour. Now this evacuation must be made by Chirurgery, i.e. by Section; in performing of which we must observe what *Aetius* and *Paulus* write, that if the Swelling have an high top, it must be cut at once, but if it be broad, it must be cut at two or three times and places.

Mercurialis.

LXVII. Some make running Ulcers with Caustick Medicines, which Cure childrens heads cannot well bear, though they be good in other cases. Others advise Burning round the head in divers parts, which sort of Remedy they are far less able to bear, because the substance of the Brain is very tender. Besides, the water will neither be discharged quickly, nor as it should: And it is certain, that the Skull, if the water abide there long, will be prejudiced, which makes it more dangerous. And *Mercatus* disapproves of *Mercurialis* his opening the Head in two or three places, because the water is too suddenly discharged; which is prohibited in these Diseases.

LXVIII. It must be observed also, that Section must always be made in the nethermost part, because evacuation may much more easily and readily be made, when the water has declivous places to run out at.

Idem.

LXIX. You must moreover have a care you do not cut near the temporal Muscle, till the water fall to one side of it, and then you must open carefully in some remote part, and apply upon the aperture Lint, with the White of an Egg, and Oil of unripe Roses.

Mercatus.

LXX. When Section is made, the humour must not be evacuated at once, but by little and little: And if this must be done in a Dropie of the Belly, it ought much more to be done in a Dropie of the Head, which is the seat of animal Spirits.

Mercurialis.

LXXI. *Aetius* his advice must be followed, if children be strong, that Medicines must be strait tied down; but if they be tender and weak, it will be enough to cover the wounded place with soft Wooll or a very soft light Cap.

Idem.

LXXII. If the tumour proceeds from the Ichors of other humours, which tumour *Avicenna* calls *Atas*, he advises that the Nurse be fed with cooling things, as Pisan and Barley-water, to apply Oil of Violets to the Head, and to abstain from Bathing; because bathing with warm water heats the Head more.

Idem.

LXXIII. A child newly born was ill of an *Hydrocephalus*, all over his Head, with a great dilatation of the Sutures; I cured this Disease perfectly, onely with *Guido's* Swathe, made in form of a Cap, where-with the whole Head was rolled, the two ends being tied in a knot. The said Swathe was renewed every day, and within fifteen or twenty days, the Swelling vanished.

Formis, obs. 6.

LXXIV. And you must have a care in this case how you make an Issue behind in the Head: for by communication of Veins, the water may easily fall on the Tendons and Muscles of the Neck, upon which it may be feared that mortal Convulsions and other Diseases may grow. It is better in a strong child to make an Issue in the Arm, when other Remedies will doe no good.

Mercatus.

LXXV. Sometimes a Contusion happens in the child's head, by reason whereof a great Swelling full of Bloud arises, to which the name of *Hydrocephalus* suits but improperly. And it is caused either by the Midwife's fault, who bruises the child's

head in the Delivery; or by reason of some vessels being open by the forcing of the child to get out, some of the Serum and thinner part of the bloud going out by it. And it may be the Nurses fault, in letting the child fall, and dashing it against a thing, or in binding the head-bands too strait, whereby the veins and arteries, that are then tender, are compressed. This serum and bloud is diffused between the Skull and the Skin, sometimes upon the crassa meninx, and sometimes upon the Brain it self. If the Contusion be slight, it may be dissolved by the help of Fomentations and Liniments; of a Decoction of Roses, Flowers of Melilot and Chamæmil; adding a Liniment of Oil of Roses and St. John's wort mixt together: or applying a Plaster of *Diachalcit.* and *Diachylum Ireatum*: But if the Contusion be great, it will be in vain to try to dissipate it by Discutients, according to Experience. ¶ I have a Daughter called *Elizabeth*, thirteen years old, born before her time, that is, fifteen days before the seventh month. By reason in the Birth she could not force, because of her Weakness, the whole affair depended upon the Mother and the Midwife. But the Midwife, drawing out the Girl by main force, so bruised her head, that for two months after she was born, she voided clotted black bloud at her mouth, nostrils and ears. In the mean time whatever Food she took, it was not given her by the breast, but in a spoon. She was swathed double round her body, while her Nails were wanting: But when the time was over, that she ought to have remained in the Womb, she began to take the breast and to thrive. In the eighth month she began to pronounce some words. And this present year 1681. she is brisk and well, and almost fit to marry.

Guillemeau, de educatione infantum, cap. 17.

Imperforati, or, They that are Imperforate.

LXXVI. It was *Albucasis* his Judgment, that Midwives ought very carefully to search children when they are new born, and if the hole be stoppt, to open it gently with their Finger, or with an Instrument, and then to lay on Wooll wet with Wine and Oil, then to cure it with Unguents, to put in a leaden Pipe, and keep it in. What I say concerning the urinary passage being stoppt, the same may be said of the anus. And, first, we must diligently consider, whether the anus can be perforated without danger to the sphincter: For if it so happen that the whole Muscle be grown together, and so Nature have made a way through the vulva it self, as I observed in a certain Girl, Perforation must not be attempted, because most certainly the Muscle would be hurt, and one evil would be followed by a worse. But if it any way appear, that onely a Skin is grown over the Muscle, then the place must be marked carefully, and a round Iron must be put into it, and we must proceed as in other cases, with Medicines and Pipes.

Mercurialis.

Labiolum Fissura, Tumor, or, Chapping of the Lips, their Swelling.

LXXVII. The Cure of the Fissure of the Lips consists in two things, in restoring the continuative moisture, and in agglutination or union of the divided parts. But because neither the continuative moisture can be restored, nor the parts united, unless care be taken that no new matter flow to these parts, it seems very necessary, that the body be kept clean, and to accomplish this end, it will be very good, unless the Skin of the Head be open, to open it gently with vitex or Mustard, and then to apply Mallow: For, as *Hippocr.* lib. de Sac. morb. says, Whenever childrens heads run any moisture at an Ulcer, always the Flux is retracted from other parts of the body, which of consequence remain safe.

Idem.

LXXVIII.

LXXXVIII. It often happens in Children, and other tender bodies, that gentle things (which must be moderately astringent and dry, without any asperity, but with a little viscosities) do no good. Such as in a hot cause are unripe Oil of Roses, Tragacanth, Juice of Gall, Pomegranates, old Fat of a Hen, Calves Marrow, &c. In a cold cause *Mel rosarum*, Tragacanth, Gum-Arabick, Mastick, &c. We must proceed therefore to such things as are drying; but yet among them we must have a care of very dry things. *Agineta* commends Turpentine with Honey, and Hogs Lard. And if the things proposed do no good, let a little more drying things be added, as half an ounce of washed Ceruis, or Litharge, more or less. If the pain be very troublesome, a little *Opium* may be mixt with the Womans Milk.

LXXXIX. I have a Son 7 years old, who, after obstructions of his Bowels, and the Swelling of his Belly, had his upper Lip much swelled and scabbed. When it refused all internal Remedies, I ordered two Issues to be made between his Shoulders with the Caustick stone; out of which much corruption ran, the Swelling of his Lip asswaged, and the Scab fell off, Anno 1680.

Linguae Frænum, or, Tongue-tiedness.

LXXX. In cutting the *Frænum* of the Tongue, the adjoining parts, and the branches of the Veins, must be very carefully avoided; yea, the Salival Ducts, in the sixth pair of Nerves, are so near to this string, that they might very easily be hurt by deep cutting, whence a continual Salivation is raised.

LXXXI. It is almost a common custom, either for Midwives to break the Bridle of Childrens Tongues with their finger as soon as they are born, or for ignorant Barbers to cut it with a common Lancet: for they think, according to the opinion confirmed by the authority of very learned Physicians, that the speech will not be perfect, if this string should remain whole; but they are much mistaken: Indeed, it cannot be denied, that sometimes the string of the Tongue wants correction; yet I make bold to affirm, that the error of the Midwives especially is intolerable, who try to break it in all, when I have known many speak well without breaking it; but several, who have immediately been almost choked with blood, and a little after died, because an Inflammation arose, which causing pain, hindered sucking. If therefore we suspect any such fault in the Tongue, it is expedient to defer the Chirurgery till the time of speaking, or to have a skilfull administration of it, according to *Aquapendent's* way.

LXXXII. In the mean time it behoves the Chirurgeon to know this, that among an hundred Children, scarce one can be found, which wants this Chirurgery; and that those Midwives are silly and ignorant, who cut all Children as soon as they are born, whereby they deprive Children of their Milk, and, other accidents following, of their lives.

LXXXIII. A Midwife cut a Girls Tongue, after her fashion, with her finger: Pain and Inflammation followed, which hindered her taking of the Breast. Her Parents thinking that the Midwife had not done it sufficiently, called a Chirurgeon, who, with equal ignorance, to mend the matter, cut both the ligament and the vessels of the Tongue, from whence the blood fell into the *Aspera Arteria*, and killed the Child in three days. When the Child was dead, the Nurse began to complain of a Swelling in her Breasts, from some Curdled Milk, and her right Breast being ill treated, degenerated into an exulcerated Cancer. ¶ A Girl new-born when her Tongue was cut, was not able to suck the Milk for Pain: And the Milk curdling in the right Breast, she laid the Child to the left for a while: A little after she observed in her Daugh-

ter the *vertebrae* of the Back distorted, towards the right-side, to which distortion, that could scarce be amended, the laying the Child to one Breast gave occasion.

Maculae, *Nevi*, or, Marks and Moles.

LXXXIV. I think Spots and Moles contracted in the Mothers Womb, may be cured; and I reckon those which Children bring into the World with them not altogether incurable, unless they be near the eyes; But in cutting Tubercles and Spots we must be very careful that they be all cut out, and that nothing of the skin or flesh, which is coloured, remain: for, they use to grow again.

LXXXV. *Georgius Segerus Ephemer. German. ann. 3. obs. 198.* disapproves of the way of taking off those Spots, by anointing with the blood of the Secundine. He says, that a Maid had the Back of her left hand, almost all of a fiery-red colour, by reason of the Mother's apprehending a sudden Burning, when she was with Child; the fright making an impression on her left hand. She, by the advice of an old woman, had besmeared the discoloured place with the blood of a Secundine; but it was so far from taking off the Spot, that it caused a great Inflammation, with much swelling and pain, which the Chirurgeon had much ado to stop, the Mark remaining notwithstanding.

LXXXVI. The best way of removing the maternal Marks, is by Section, which is easie, if the Tumour can be tied about the root with a thread, and such things applied, as may commodiously intercept, or make revulsion of the affluent humours. But we must have a care, that no Artery, nor any great Vessel, especially a Nerve, be hurt; for if Nature permits the loss of the Nose, an Ear, or Eye, without danger of Life, why may she not use the same liberty in her spurious productions? A Child was brought to me, over both whose Eyes, and all its Forehead, there were soft red excrescences. I undertook the Cure, and I quickly cured the Child of them all with good success. And this is not the only Swallow I have seen.

Obstructiones, or, Obstructions.

LXXXVII. Whether is it necessary to give Purges before Aperients to all that are troubled with Obstructions? Which many Physicians religiously observe, without any distinction: Whereas it is evident from the *methodus medendi*, and from certain experience, that obstructed Bodies rarely admit of purging Medicines before the obstructions be a little opened; because Purgatives draw the disturbed humours to the parts affected, far more than other Medicines, whereby the Patients are far more hurt; for the parts so affected can neither receive them, nor suffer them to pass through, which uses to prove grievous; besides, they often vomit up their Purges, or the Purges do not work, and they bear them ill, and sometimes a Jaundice follows. We must conclude therefore, that for the elder sort, it is both usefull and necessary to Purge; because usually there are excrements gathered from a bad course of Living, which, unless you Purge before you give openers, you will do far more harm. For all that are troubled with obstructions are voracious, especially the greater, and Females. Moreover, you must Purge those bodies, in which the juices are not distributed, because of obstructions, do redound, and wander to and again in the passages of the Ducts, of which nature these juices are. In all which, but with prudence, we must take care to Purge with such things, as the region, in which these superfluous humours are, and the nature of the humours do require, so the Medicine draw not the humours from far, nor be given in a large quantity; for this would be vomited up again;

again; and the other would draw to the parts obstructed; which, because they are obstructed, cannot receive these juices, and it may be feared, that the body may be disturbed, and grow worse. But in Children, and in all others, who abstain from bad and abundance of food, it is not always necessary to purge their bodies, but either having first made them vomit their crudities, or given Clysters, or Syrups, that are moderately extergent and concoquent, we may safely give opening Medicines, especially when for some days before, a spare and a legal course of meat and drink has been insisted on, and when the Medicine has Steel in it; for that Medicine exerts its virtues, and operates only in the parts, where it is received, and not in those that are remote, as other deobstruents do, which pass to the organs of Urine, and to the Womb: for it tends downwards to the belly, and cleanses those ways, although by its sulphureous faculty it communicate its virtues to other parts, without any damage. But if there be much excrements in the first region, or for some other reason, or to satisfy the vulgar, make no matter of purging by turns; when you give a deobstruent Medicine, every fourth or fifth day. For, to purge all indifferently, before taking of deobstruent Medicines; or, to purge none at all, is erroneous.

Mercatus.

LXXXVIII. It is sufficient for such as have a cold Belly, and abound with crudities, to give a little Honey of Roses seven or eight days before taking of the foresaid Medicines, especially if you add a little of the decoction of Cinnamon, Sassafras, or Fenil, with a draught of very hot water. And then I use to recommend exercise the same days early in the morning. And Fomentations will be of great use, which may be applied every third day to the Belly, and parts obstructed, of a decoction of Capers, Wormwood, Dodder of Time, Chamæmil, &c. If the Liver be out of order, the taking of Syrup of Cichory, *de duabus radicibus cum aceto*, with Water of Grafs, or Sowthistle, or *Scorzonera*. Nor will it be improper to add an ounce of Water of Rheubarb, that something may be cleansed, and not purge violently. But if you have a mind to open the Spleen, it will be proper to give Syrup of Hops, Liverwort, and *Byzantium*, and Borage, with Water of Tamarisk: And for those that are so held, I do not disapprove of mixing something purgative withall, such as a decoction of Pennyroyal; or an infusion of 2 drachms of the pulp of the Seed of *Carthamus* in a rag: for whom also Fomentations applied to the region of the Spleen will be good.

Idem.

LXXXIX. When the Body is prepared, the Question is, Whether it be always convenient to open obstructed Bodies with Medicines, which have Steel in them? Or, Is it sufficient in some to use those things which the Ancients recommended for this purpose? In which case indeed I think it is sufficient for them that cannot use vehement exercise, and it is confirmed by many experiments, to take Medicines, which have no Steel in them; for Steel Medicines require laborious exercise, and the others not. The virtue of Aperients, and the form of the Medicine, supplies the defect of Exercise, or a very little suffices. Whence it is evident, that these aperients are more proper and safe for Children, unless the obstruction be so old and stubborn, that these will do no good, then the urgency of the case forces us upon chalybeate Medicines.

Idem.

XC. And we must show, how we prepare and give Chalybeate Medicines. I advise, in this tender age, to give some aperients without Steel for several days; but if they do no good, then we must be necessitated to give things with Steel in them: If therefore we must begin with them, let the body be exercised some days before, giving one spoonfull of Honey, and drinking a little water after it. Chalybeates are made, either, 1. In a

potable form, in manner of Syrup, or 2. In form of an Electuary, or 3. In a solid form. You may make a Syrup of the froth of the Steel, which arises from a decoction of the Limature, several times washed, made in water of Grafs, Hops, Hartstongue, adding to the water and the froth, juice of Apples, Cichory and Hops, with Sugar; or, Take of water of Tamarisk, Grafs, Hops, Dock-root, each three ounces. In these, quench half a drachm of filings of Steel red-hot; heat the like quantity of filings of Steel again, and quench them in the same water, and doe so five times with new Steel. Give 1 ounce of this water to Children, and make a Syrup of it with juice of Hops, Borage and Cichory, and give one ounce and an half. An Electuary may be thus made; Take of Quodiniack of *Scorzonera* three ounces, Syrup of Maiden-hair 2 ounces, Powder of Bezoar-stone 1 Scruple, Powder of *Diamarg.* and *Triasant.* each 2 scruples. Mix them. But I must tell you, it is necessary, for a few days, between whiles, to give a little Rheubarb-water (which is thus made; Take of water of Hops, Grafs, Maidenhair, or Cinnamon, two pounds: Infuse three drachms of Rheubarb powdered) with Syrup of Cichory, or *Scorzonera*, or three or four spoonfulls of Syrup of Cichory with Rheubarb: for it wonderfully carries off the superfluous humours of the belly and mesentery by stool; especially, if you add a little of the decoction of Seed of *Carthamus*. In taking of which Medicines you must observe this order, that the Child, either before taking of this Medicine in a solid form, drink a draught of diuretick water warm, or after it. And a thing which I rather approve of, is to sleep a little upon it, as long as may suffice, to dissolve the Medicine, and then to use exercise. ¶ *Specificum Intestopham*, used much by the Physicians of *Schaffhausen*, will answer all intentions; Take of White Sugar-Candy two ounces, Volatile Salt of Soot half an ounce, Root of Florentine Iris 2 drachms, Root of *Aron* prepared, *Diaphoreticum Joviale*, *Diaphoreticum Martiale*, prepared Crabseyes each 1 drachm. Mix them. Make a fine Powder. If you add Anniseeds, Nutmegs, or Cinnamon, each half an ounce, you will have a Powder, inciding and dissolving viscid humours, tempering and absorbing the acid and austere ones. The dose from five grains to half a Scruple, in some Syrup, morning and evening.

Idem.

M. Th. Zwinger.

XCI. In Children, that are troubled with obstructions of the Mesentery, if they be not lean, nor cholerick, nor have a hot Liver, and be not thirsty; but have a soft flesh, a cold Stomach, squeamish and inclined to Vomit, full of crudities; and if the obstructions consist of Condensated Phlegm, I think it very wholesome to give a little Wine, namely, as much as is sufficient to recall the Heat into the Bowels, to attenuate gross excrements, and help the Obstruction of crude ones, whereby Obstructions and Accidents are far better cured, than by any other remedy, which I find by faithfull experiments and instances. But if you give it, once a day is enough, not mere Wine, but mixt with a little boiled water.

Mercatus.

Oris Inflammatio, or, An Inflammation of the Mouth.

XCII. Whether is Honey of Roses good for an Inflammation of the Mouth? It is affirmed, because Medicines wherewith it is mixt, have, in regard of the Honey, an absterive faculty, and, in respect of the Roses, a cooling one. But, some suspect the taking it. 1. Because of the hot, fiery quality of the Honey. 2. Because it is readily turned into bile. 3. Because it is rather proper for Phlegmatick Diseases. I answer, 1. The hot quality of the Honey is tempered by the Roses, by reason whereof it is cooling, as well as detergent: Wherefore, 2. It is not so easily converted into Bile, as if it were

Horstius. were alone. And, 3. An afflux of Phlegm is joined with it.

Pavores, or, Frightfulness.

XCIII. Whether is Wormwood good for frightfulness? It is affirmed, by reason the juice tempered with Sugar is proper for the antecedent cause, namely corruption of Meat in the Stomach. Nor is it any hindrance, that Wormwood, as they say, affects the head, and by heating, may increase the exhalations, and may cause sleep before the time, which causes this evil. For addition of Sugar corrects the first mischief, when it is made into a Syrup. Therefore, 2. If it be taken after a right manner and season, the other mischief need not be feared. 3. Nor need unreasonable sleep be feared here; because it corrects the cause of it.

Scabies, or, The Itch.

XCIV. Let Mothers have a care that they cure not the Itch in Children, whatever part of the body it be in, unless it corrupt the eyes, ears, nose, and such parts. My eldest Son, till he was seven years old, had not one speck of his body; wherefore I often foretold, that some sudden and mortal disease would seize him. And indeed, being taken with a stoppage of Urine, he died the seventh day of the disease, of a great inflammation of the Kidneys and parts adjoining, which turned to a Gangrene. Nature, to wit, not being able to purge the body of vitious humours by the Itch; they, in the seventh year, as by critical expulsion, fell suddenly from the head, breast, and other parts, upon the Loins. In my practice I have met with several diseases, internal and external in Children, in whom, either Nature had not expelled the Itch, or it had been cured violently. Therefore let the honest Physician, abstain from Medicines; And if there be a necessity, let the Pain of the Itch in Children be mitigated only with fresh Butter, or with it waht in Rose-water, or with Creme. ¶ Children are very often taken with an Itch in their hands and feet, when the rest of their limbs are untouched, by reason of their voraciousness, which, if you should heal with Licharge, Quicksilver, Oil of Bays, and a little Brimstone, as Empiricks doe, you may presently cure them of the Itch, but you will put them in present hazard of their lives, because you partly hinder the circulation of the blood, and partly repell the excrements of the third concoction, as when you anoint on the cutaneous veins and arteries.

Simon Pauli. ¶ In this sort of Ail, the Parents always desire help of Physicians, or old Women. But if any one will but consider it seriously, beginning with the nature of the thing, he will find nothing more needless; than a Medicine for it; for, by applying any, all we doe, is but to weaken the Childrens strength, so that the recrements being kept in, grow more furious, and, it may be, fall more violently (as they often do) upon the principal parts. Wherefore, I judge the cure of this present Ail, and the care of the internal recrements, must be committed to Nature onely, because she alone will insensibly, by little and little, and most securely separate those vitious recrements from the nutritious substances, and will insensibly also transmit what is amiss into the ignoble parts, that is, into the Skin nearest to where, they are most prevalent. And when she has bred much good aliment, and very little bad excrement remains, she takes care to dry up the foulness transmitted to the Skin, and makes it separate and fall off, the Skin remaining whole and sound underneath, which will receive no more, because there is nothing remaining to be separated; and if there be anything, it is either destroyed in the place, or the Skin being whole, digests and dissipates it, and permits it to go out

freely, without making any abode there, so as to turn to the Itch, as it did formerly. By which prudent Patience alone, I have known several Children restored to their perfect health and beauty; whereas I have seen others ruined, by using unreasonable and useless remedies.

XCv. But let no Man think, that it may not be holpen by any means, nor in any case: Let a Man consider, that if with the recrements there be any thing of the Venous kind, the abundance whereof has with it heat, and falling down with the recrements, signalized the Itchy parts with inflammatory dispositions and redness, especially if there be a Fever; then indeed we must cure with cupping and scarifying the Armes and Shoulders, or, for greater revulsion, the Thighs; to draw to them what is redundant in the body; which when done, you must give the Child and Nurse attemperating things. But, if it appear, that the Venous kind has, besides the heat of blood, something bilious, salt; or disaffected, it will not be amiss to Purge gently: This one thing nevertheless observed, that you never attempt to apply anything to the Itchy part, since it is certain, that seldom any thing does good: for oftentimes you may render the part more tender and soft, so that if there be any thing in the body, the Skin more easily receives it, and when it is received, makes the Itch worse; though the scabs and pustules, that were there before, be fallen off.

XCvi. But if the pustulous Itch increase so, that it will neither give way to change of Age, Diet, nor Medicine, but by an invincible Itching, and for fear of a Leprosie, force us to these greater remedies, especially if the Patient be in danger of a Consumption, then we must take care, by other Medicines, which, besides that they Purge radically, do substantially moderate and temper the Liver, and repair it with new nutrition, and which also have the faculty of rarefying, purging and cleansing a filthy thick Skin.

XCvii. But let not any Man think, that there is no time when we may apply things to the Itchy parts, that the Scabs may either ripen, or dry and fall off. And let a Man consider, that it must be done then especially, when it appears the Disease is towards the declension, and less Scabs and Pustules break out, and what is broke out more easily falls off; It is a sign indeed of paucity of matter, and of the vigour of the faculties, because it wastes more insensibly, and breeds less, or less remains of what is contracted from the Nativity. At which time Nature must be helped with things that neither repell nor draw, but onely soften the Scabs, dry up the fretting running places, and absterge the foul.

Scrophule, or, the King's Evil.

XCviii. Great Prudence must be used in treating Children in the King's Evil. 1. Gentle things must always be used. 2. Violent Medicines must be avoided, because there is danger of raising a Fever, and lest their tender flesh should be hurt. 3. The Swellings must be treated neither with fire nor the knife, which are near the Arteries, or great Nerves, especially about the Neck, lest the rever-five Nerves be hurt.

Sirasis, or, Head-moldshottennes.

XCIX. I am compelled to take notice of Avicenna's mistake concerning Childrens Sirasis. He took all that Rhases and Paulus wrote concerning Childrens Sirasis, and put it word for word into his Chapter of the Erysipelas of the Brain, and defined it to be an Erysipelas of the Brain, which Diseases are quite contrary; for an Erysipelas is an Abscess, with inflammation coming of yellow Choler, which, if

it seize the Brain, as *Avicenna* thinks, there will be a Fever, and a *Sphacelus* of the Brain, which usually kills the Patient on the third day, *Casp. 7. §1.* Each of which things is not competent with a *Siriasis*: for it is a far milder Disease and heat of the head than an *Erysipelas*, and it usually takes Children in the heat of Summer, because of pituitous blood, or phlegm it self putrefying about the membranes of the Brain, and inflaming the Spirits in the Arteries with a gentle Fever. You will Object, That the same remedies, with which *Dioscorides* and *Paulus* extinguish the Heat of a *Siriasis*, since they are cold and moist, will doe an *Erysipelas* as much good, which is a hot and dry Disease. But you are mistaken; for, upon the account of the concoction of the Disease, which is an alteration, causing the Putrefaction to cease, the substance remaining, they require the same Medicines. If indeed, by applying cold things to the *Sinciput*, the Arteries of the Temples and Wrists, and Forehead, in the conceptacles whereof the *Siriasis* lies burning, you can extinguish or alter the external heat in the membranes of the Brain and Arteries, which might kindle putrefaction, certainly you have prevented it, and concocted the Disease. And, this very thing you may doe, with the same remedies, in the cure of an *Erysipelas*. But, as for what concerns the cause and substance of the Disease, there is need of far different remedies, which the substance of the Disease, and its cause, will indicate to you. First, A cold and moist Diet was ordered the Nurse; and after I had applied Nettles pounded in a Mortar, with a little *Unguentum Populeon* to the Arteries of the Temples and Wrists, and had renewed them every hour, the Heat of the *Siriasis* was extinguished in less than two hours.

Languis.

Mercurialis.

Ideri.

C. Outwardly almost all commend the Yelk of an Egg, with Oil of Roses. The Juice of Heliotrope is admirably commended by *Dioscorides*, and others. Juice also of Nightshade and Lettuce is good, but especially the Juice of Citrulls, and of Gourds. But we must take notice, not to surpass in these cooling Medicines, lest while we avoid Heat, we fall on the Ice, that is, lest of one bad Disease another far worse should be made.

CI. There is another thing also to be observed, that these Medicines, as all Men advise, be continually changed, and that they be always used warm in Winter time, and actually cold in Summer: Because if they be kept long on, they grow hot and dry, and afterwards doe more harm than good.

Tuffs, or, a Cough.

CII. That a Cough sometimes arises without any great fault in the Lungs, because of Morbifick matter falling on the Pneumonick Nerves, the History of a Girl, who was ill of Convulsion-fits, and of a grievous and continual *Vertigo*, does shew: To whom, when a fomentation of a Cephalick Decoction was applied to her Head, presently her Swimming ceased, and instead of it there came a dry Cough, without any Spitting, which troubled her night and day. Which without doubt happened, because the spasmodick matter was forced out of the Brain into the origination of the Nerves. This merely convulsive Cough seldom occurs in adult people; in Children it is very frequent, and sometimes epidemick: which when at first it has been moderate, afterwards it grows violent and convulsive. So that in Coughing the Diaphragm being drawn upwards, and kept in a long *Systole*, or often repeated, the Lungs are much straitned, and greatly hindered in their motion: In the mean time, because their Breath is stoppt, and the blood is kept about the heart, and therefore stagnates in other places, the Patients are in danger of choaking, and often contract a livid and dead countenance. In this case,

besides spasms, raised by straining to Cough, about the Heart, oftentimes the Stomach sympathizes, and casts all up that is in it by Vomit: Nay, I have known in some young Children; that this Disease has fallen now and then on other parts, and has raised Convulsive motions in the Face, Eyes and Limbs, and sometimes has proved mortal. The Disease is difficult, and usually very long in cure. The principal indications will be to purge the ferrous and sharp humours, drowning the Lungs, out of the blood and bowels, that their tendency to the Brain, and sometimes to the Breast, may be prevented: And to strengthen the Parts, that they may not easily admit the superfluities of the effusing Serum. To these ends, Vomits and gentle Purges are almost always good, and sometimes must be repeated. Blisters are often usefull: yea, if the Disease be stubborn, an Issue may be made in the Neck, or Arm, or about the Armpits, Drink and liquid Aliment must then be taken in less quantity than usual; and instead thereof a Diet-drink of *Sarsa, China*, Sanders, shavings of Hartshorn, and diuretick and antispasmodick ingredients may be used. In this case, some remedies are cried up, as Specificks, such as Cup-moss, given in Powder, or boiled in Milk, and so given frequently every day: A decoction, or Syrup of Castor and Saffron; Decoctions of Root of Peony, Mistletoe of the Oak, and Hyssop, have done good to many: Water of Black Cherries, Saxifrage, and Water of Snails distilled with Whey, and proper ingredients are often willis given with success.

CIII. Whether in Childrens Cough may the Breast be anointed? The Negative seems probable,

1. Because all Anointing stops the Pores of the Skin. 2. And the virtue of the Ointment reaches not to the inner parts. 3. By rubbing of the Ointment on hot the fluxion to the part affected is greater. But I hold the Affirmative; because such Liniments have an emollient, digesting and dissipating faculty. Therefore I answer to the first, That Anointing actually cold, stops the Pores of the Skin; but not that which is actually and potentially hot. 2. It is sufficient to help Nature, and to promote the discharge of the peccant matter outwardly, by occult transpiration. 3. It is granted, that some attraction is made; but it is to the exterior and sound part.

Horstius.

CIV. In Childrens Coughs, which our Country people call the Hooping Cough, Blood-letting gives great relief, and far exceeds all pectoral Medicines.

Sydenham.

Vare Tibia, or, Crooked Legs.

CV. Oftentimes Children about two years old, when they begin to go, are crook-legged, for which their careful Mothers take the advice of Chirurgeons; and they try to set their Legs and Thighs streight with divers Engines, but to no purpose; because naturally, and of their own accord, when they are three or four years old, the Legs and Muscles grow strong, and the Parts return to their natural state.

Formis, obs.

Ventris Dolor, Tumor, Pain, or Swelling in the Belly.

CVI. What remains of the Navel-string after cutting, mortifies, and in four or five days time falls off of it self: And hence, unless you put a linen rag three or four times double about the part, which contracts great Cold, pains in the Belly arise, which are ascribed to other causes. It is a sign this is the cause, for they abate and cease by applying heating things.

CVII. Children are often troubled with inflammation of the Belly, from crude Milk, which is neither well Purged by Vomit, nor Stool. It is indeed

indeed Crudity proceeding from abundance of Food, which exceeds the strength of the Stomach, which, unless it be quickly prevented, degenerates either into tedious fevers, or into a looseness, reaching and vomiting, watching and restlessness: There attends this Disease a gentle Fever, or celerity of Pulse, shortness of Breath, a leaden or pale colour of the Face, and swelling of the Eyes and Face. In which case we must be more solicitous for discharging the abundance, than for strengthening the Stomach or alteration. I indeed endeavour to diminish the matter by Clysters, Suppositories and parsimony of Milk or of other Food. If the Disease go not off presently, we must not stand dodging, but give a gentle purging potion. After which I order such things to be applied to the Belly as have a virtue to attenuate, incise and make lax what is in the Belly, that it may the more easily go off.

Mercatus.

CVIII. In children, yea, and in grown people there is often a hardness and inflation of the Belly, the cause whereof is the hardness of the Mesaraick Glands, and so there is onely passage for the thinner Chyle to the great lacteal Vein, upon which the flesh of the Muscles grows limber, the Body is rendered heavy and tirelome, yea, and at length a Fever and Consumption arises. I use to remove the Disease by this Liniment without any trouble; Take of Unguent. Alth. compos. 1 ounce, Arthanit. Martiat. each 2 drachms; Oil of white Lilies, Chamæmil, each 2 drachms. Mix them. It is good to chew these Trochiscs all the time of the Disease; Take of Steel prepared, Crabs-eyes prepared, each 1 scruple; Tartarum vitriolatum half a drachm, Lapis Prunellæ 16 grains, Spec. Aromat. Rosat. 1 scruple, white Sugar 2 ounces. Mix them. Make Trochiscs. Purgings in this case must be celebrated onely with Cassia, Cream of Tartar and laxative Syrups; for the Glands will not bear stronger Purgatives.

Barbette.

Vermes, or, Worms.

CIX. According to Galen's judgment, 4. Meth. the principal scope in curing of Worms is, to get them out of the Body: But because they cannot easily be got out while they are alive, therefore it is necessary first to kill them, or so to stony them that they cannot resist the Medicines. And the things that kill or stony them are all bitter, sharp, inciding, astringent things and sharp and oily ones.

Mercurialis.

CX. Because these Animals must be cheated, and are delighted with sweet things, the onely way is, always to mix delectable things with such as kill them; and therefore they doe very ill, who give bitter or fowre things alone: for the Worms will not suck plain Poison. But if the Poison be mixt with sweet things, ludificatur lumbrici, as Lucretius says of children, and therefore they draw the Poison with Honey and sweet things. Wherefore Medicines that are given for the Worms, must always be mixt with Sugar, Milk, Honey, or Honey and Water. For my children at home I order an Oxy-mel to be made of the Decoction of Honey, the sharpest Vinegar and Wormwood: For such an Oxy-mel admirably preserves children from the Worms.

Idem.

CXI. In those Medicines that are given by way of Clyster, always sweet things must either be given alone, or must prevail above the rest: The reason is, because these Animals being drawn by the sweetness, come down to the lower parts. On the contrary, in Medicines that are taken by the mouth, the sharp or bitter things must prevail over the sweet: The reason is, because if there were more sweet than bitter, these Animals might easily be drawn into the Stomach, and could not well be killed.

Idem.

CXII. It is worthy observation, that Medicines accommodated to the killing of Worms must by no means be violent: for, besides that the Stomach

is offended by them; the Worms, being disturbed, grow more enraged and cruel.

Idem.

CXIII. The onely time to take all Medicines is, when the Stomach is empty, because if Medicines be given when the Stomach is full, their virtue, which is otherwise weak, is dulled and almost extinguished.

Idem.

CXIV. There is no Medicine which is so generally proper for killing of all Worms, nor so present a Remedy as that they call Coral wort or Seamos. For Mountebanks use this Medicine, and they doe Wonders with it: so that I have seen an incredible quantity of humours sometimes voided with this onely Medicine.

Idem.

CXV. Our Countrey Women think that all children have the Worms; But when none are voided, they say, they are turned to putrid humours; And they are not much out; for as Worms inclosed in a Vial glass, and covered up in warm Dung, do presently turn to slime, why may not the same be done in our Bodies, whose heat answers to the heat of Dung, when the Worms are killed with bitter Medicines?

Pacheguus ad Riv. obs. 17.

CXVI. Sometimes Patients have a Fever with the Worms, and sometimes they have none. When they have a Fever, the coolest Medicines must be chosen: When they have no Fever, we may use hotter things.

Mercurialis.

CXVII. And it is sometimes necessary to kill the Worms, and stop the Looseness which the Worms cause. Wherefore we must use deterfive bitter things, and not astringent ones; lest the Worms, when they are killed, be retained, and putrefie. Let therefore Clysters be made of a Decoction of Lentils or Lupines, and a Decoction of Colewort, to which we may add Roses, Myrobalanes, or such things.

Rondeletius.

CXVIII. It may be queried, Whether Medicines that evacuate insensibly, be proper in these cases, as among others a Decoction of Guaiacum? Without doubt, if we consider the place where the matter of Worms resides, the use of such Medicines will be no way convenient; for this evacuates matter in the habit of the body; Worms are bred in the Guts. But notwithstanding, since the Wood has a Bitterness in it, and the Decoction of it is sharp and very bitter. I think it an usefull Medicine, for that it not onely by drying may consume the crude humours of the Stomach and Guts, but is also able by its great bitterness and acrimony, to kill these Animals. And therefore a Decoction of the Wood may be usefull both for prevention and cure.

Mercurialis.

CXIX. Galen indeed forbids Treacle to children, because of the thin Texture of their body, and the abundance of Heat; for fear of dissipating the Spirits. Yet I saw at Rome the excellent Dr. H. Savianus give it to children of two years old. And I in imitation of him have given it several times to my own children, when they were troubled with the Worms. Wherefore I think the use of it need not so much be feared.

Jordanus, de Peste Trad. c. 7.

CXX. Quicksilver is good for the Worms in children, but it is after they are three years old: The dose for these is three grains: For the first seven years, seven or eight grains: For the elder sort, half a scruple. They that are of a soft and very tender habit of body can scarce bear it; but they that are of a fat and gross habit, do easily: For those in a Fever, it is given in Grass-water; for them without, in Wine. It is given alive, not killed; for so it sticks to the Stomach and Guts, and causes cruel Symptoms: But it must first be washed in very sharp Vinegar, and then strained through a thick Leather. Brassavolus, Matthiols and Frisimelica, used it so. Water wherein it has been steeped does the same, and brings no inconvenience.

Augerius.

CXXI. I know nothing that preserves children so well from Worms, as frequently to mix Aloes with their Meat. It may be done by gilding small Pills,

Pills, which for the smallness are scarce sensible. Give four or five of them according to the nature of the child.

Augenius.

CXXII. Because children usually are very subject to Worms, which are easily bred of Crudities, caused by cramming and corruption of the Food: Therefore some Medicine, which yet may not cause a worse mischief, must be made use of; for strong things, especially in dubious cases, must never be used. Let therefore four ounces of water distilled off the Juice of Goats-rue suffice; or a draught of Rose-water, with Juice of Citron or Lemon; or Broth altered with Sorrel; adding the Juice of Citron.

Fortis.

Vigilie, or, Want of Sleep.

CXXIII. Want of Sleep in children is a Disease different from want of Sleep in old people; because it is an absurd thing to think that this can rise in children from that cause, namely, because of Driness, which causes want of Sleep in grown people. Therefore it is well judged by all Physicians, when children cannot sleep, that it proceeds from nothing else but from Meat corrupted in the Stomach, from whence while sharp Vapours are constantly carried to the Brain, they piercing the Membranes hinder Sleep; therefore the whole stress of the Cure lies especially upon correcting the Stomach, that it may not corrupt the Meat, and that

Mercurialis.

Sleep may be provoked by all means. CXXIV. Whether is Saffron good in want of Sleep? It seems not convenient, because it heats and dries. 2. It excites the Senses. 3. It causes a mobility of Spirits; wherefore it is said to refresh the Senses. But note, it must not be prescribed alone in this case, but mixt with a cooling Syrup, to which it adds penetration. Therefore, 1. It heats and dries alone, but mixt with other things, it procures Sleep, by raising gratefull Vapours. 2. Therefore it only excites the Senses by it self. 3. With hot Cordials it revives the Heart by introducing a mobility of Spirits; but not, when mixt with cold things.

Horstius.

CXXV. Things to procure Sleep cannot very safely be given children, because they dull their Wits. Nurses therefore doe very ill in giving them Syrup of Popy, that they may provide for their own ease. Hypnoticks should rather be given to them than to children; but they must be moderate, as sweet Almonds, Lettuce, Popy seed, &c.

Sennertus.

Umbilici Inflammatio, Tumor, or, An Inflammation or Swelling of the Navel.

CXXVI. In a Swelling of the Navel from the bursting out of a Gut or the Cawl, when external Remedies doe no good, we must proceed to cutting or burning. About cutting the same way almost is laid down by Celsus and Paulus. But we must remember what Celsus says, that Sucking children must by no means be cut, but more adult children. Besides, the bodies of all children are not fit for cutting; but such as are of a good habit of body, without any Itch or Breaking out: For if bodies of a bad habit and ill humours, be cut, they are difficult to heal; yea, they are in danger of a Gangrene. Besides, we must observe, that every season is not fit for cutting, but only the Spring; nor

Mercurialis.

Autumn, Winter, nor Summer. CXXVII. In an Inflammation of the Navel, Oil of Roses with Oil of Worms is conveniently applied to the Navel, till the Inflammation abate. Which yet is suspected by some, because it uses to be otherwise prescribed in cold Diseases of the Nerves; wherefore it may be feared that by its heat it may make the Inflammation greater. But observe, when they are mixt together they temper the Inflammation: though it alone may cause an Inflammation.

Horstius.

CXXVIII. Sometimes the Navel in young children grows as big as an Egg, because it has been ill cut or bound, or ferous humours have flown thither, or because that part has dilated it self more than it should by crying and the gripes. Sometimes they bring the swelling joined with an abscess from the Womb with them. But the Chirurgeon must no way try to open it; for upon opening, the Guts fall out, as I have observed in many.

Paracelsus.

CXXIX. Sometimes the Navel sticks out with a carnosus substance growing to it, which fault, though it seldom happen in children, yet it is difficult, if not impossible to cure, if it grow. At the beginning the breeding of flesh may be hindered; for then only it is capable of cure. At the first coming you must scarifie the Legs, purge gently, and then apply Repellents and Strengtheners to the Part. When this is done, I do not advise to proceed to caustick Medicines, as Authours advise, in the *Scrotum*: for it is enough in children to waste by degrees what is softened and attenuated. But consider, in this Disease you must proceed alternately, viz. first you must use Repellents, and afterwards things that dissolve and digest; but if you doe no good with these things, believe the Disease is incurable, unless perhaps something exulcerate of it self, to which something may be applied, that may eat the flesh by little and little, having a care that no Vein or Artery be touched; for fear of an Hæmorrhage.

Mercator.

CXXX. And the Navel sticks out with blood or arterious or venous spirit, at which time have a care you make not bold through any persuasion to open the Navel, or scarifie it; but you must cure it only as an Aneurism or *Chemosia* with Repellents, Astringents and Plaisters good against a Rupture.

Idem.

CXXXI. Among all things that are good for a Rupture of the Navel, I reckon this best, which I ordered to be made for the sake of a great Prince; Take of new Wax three pounds, Resin, *Colophonia*, Tar, Oil of Eggs, each two ounces; Dragon's blood three drachms, Turpentine two ounces, Root of Water-lily and its Flower, each half an ounce; Root of Comfrey one ounce, *Cypress* nuts half an ounce, Galls one ounce, Bole Armenick half a drachm, Bark of Frankincense-tree half an ounce, Aloes one ounce, Bloud-stone half an ounce, of both Litharges two ounces and an half, Mastick, Mumy, Myrrh, each two drachms; *Carabe*, Pomegranate Flowers, Earth-worms burnt, Red-roses, each two drachms and an half; *Galbanum*, Ammoniac, each four drachms. Make a Plaster according to Art.

Vomitus, or, Vomiting.

CXXXII. Vomiting in children comes one of these two ways: 1. When they suck as much Milk as their bellies will hold, but cannot digest it, they presently strive to ease themselves of their burthen and trouble, and then, after sucking, they cast up what is grievous, and concoct the remainder well. This Vomiting proceeds from abundance of Milk, and strength of the Stomach, and therefore is for the child's good. But then they vomit in another manner, to wit, when they have not sucked much Milk, nevertheless, as soon as they are taken from the Breast, they vomit and vomit again, not once or twice, but oftner, till there is no Milk left in the Stomach. And as the first find no harm from their Vomiting, but grow and thrive, and live merrily; far better than on those days they do not vomit; so these last, after their Vomiting, are lean, consumptive, and do not thrive. This Vomiting is always morbid, either because of the nature of the Milk, contrary to the child's nature, acid, salt, or bitter, which presently after sucking it abhors, and discharges by Vomiting; not resting till it be free from all the inimicus aliment: Or, 2. Because the child is of a Stomach

mach so sensible, weak and easie to vomit, because it is no less altered by its familiar food, and with a great irritation endeavours to expell it; till it be eased of its trouble. If the child vomit by reason of the Milk, it refuses the Breast, and cannot suck, avoiding as it were the ingratefull aliment. If it be the fault of the Stomach, it will exceedingly crave the Breast, will suck greedily, and will be pleased with its aliment, but presently nature rises against it, to discharge it, not because the aliment is bad, but through some fault in the Stomach, which incites it to this bad office. If it be abundance of Milk, it is easie by abstinence to moderate the Nurse: If there be a fault in the Milk, I reckon it an error to amend it by Physick or Food, but always chuse rather to change the Nurse for a better, and that presently, than to waste time needlessly: If the fault be the Stomach's, you must consider, 1. Whether any thing amiss be retained in it, which being disturbed by sucking, provokes the faculty to excretion: Which you may know, because presently after sucking of Milk the child is restless, and cannot sleep, till at several times all the Milk is discharged; then it falls asleep and is quiet. In which case it will be convenient to purge the child's Stomach with some gentle Medicine, as Honey of Peach-flowers, Roses, &c. which being done, you may boldly both strengthen the Stomach inwardly and outwardly, and stop the Vomiting, especially if the Stomach appear to be lax, because also the Milk passes by stool but half changed: But you must not insist long on these things; for children are easily troubled with obstructions.

Mercatus.

CCCCXIII. This must be observed in giving Medicines to strengthen the Stomach, that they may be given in the morning and before dinner; Yet reason tells us, that they will be far more beneficial to the Stomach before Supper and near Sleep; for Sleep does help much in all vegetable actions, except evacuation of the Belly.

Inflammatio, or, An Inflammation.

The Contents.

Its Generation and Cure. I.

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I. **A**S, 1. All the blood is carried by the Arteries from the Heart to all and each of the containing parts of the body, both for their vivification, nutrition and increase; and for the separation of all the humours or contents usefull and useless, some way or other, from the rest of the mass; So the same, after this multifarious benefit, multifariously conferred on both bodies, being residuous and surviving, but deprived of some part of it self, or effete, is again carried by the Veins from all and each of the same containing parts to the Heart, there to be renewed by the mutual mixture of various concurring parts, and by their effervescence and vital rarefaction afterwards. 2. And this reciprocal flux and reflux of the blood is called now the Circulation of the blood. 3. But the Blood is sometimes hindered in its reflux, when it either stagnates, and stops in its Vessels and Passages, or is pou-

red out of them, whether it be into the Substance of the adjoining parts, or into the Cavities of the body; or whether it happen out of the Body.

4. The Blood stagnates in its Vessels, either through an excessive *Plethora* called *ad Vasa* or as to the Vessels; or by reason of their narrowness, caused either by their compression or obstruction.

5. The Veins are compressed so as to hinder the reflux of the Blood, sometimes by hard tumours adjoining; sometimes by bands about the parts, which straiten both the Veins and Arteries. 6. The Veins are stopt sometimes by the Blood it self or Phlegm coagulated and concrete in them; sometimes, though rarely, by a Stone bred in them and increased by degrees.

7. By Veins I understand, as most do, the cavernous substance of each part, by which the Blood, for the most of it, passes out of the Arteries into the Veins. 8. The Blood is coagulated both by the extreme cold of the Air or Water affecting the Parts very much; and by powerfull astringent or austere Medicines, communicated to the Blood either inwardly or outwardly, and congealing it.

9. Phlegm is coagulated in the said Vessels by the same causes; but most frequently by the cold of the Air, Water, Drink or of other things suddenly seizing the parts that were hot before either inwardly or outwardly, thickning and curdling the Phlegm, especially the viscid, which has by some cause or other been dissolved in the small Gut, and carried thence into the Blood, and dispersed every way with it.

10. Where note, the more causes concur, and the more peccant they are, so much more easily, quickly and plentifully is the said Phlegm dissolved, and carried to the Blood. 11. And the Blood stagnating in the said Vessels, and gathered by little and little, distends them more and more, and so indeed, that sometimes they burst, or afford a passage for it some way or other; upon which there happens then an effusion of the blood out of its vessels, whether it stick in the substance of the adjacent parts, or be gathered in some adjoining cavity of the Body, or be all poured out of the body.

12. The Blood as yet inclosed and remaining in the capillary vessels, and it may be also in the sinuous substance of any part intermediate to them, or poured out of its said usual passages, but open and patent into the porous substance, whatever it is, of the parts themselves, and especially the carnos or membranous, or into their interstices, and gathered in a moderate quantity at least, does of it self presently grow hot, and produces a troublesome sense of Heat in the sensible part, and being by degrees corrupted, it uses to turn into *pus* or *sanies*. Wherefore the first mutation is called an Inflammation, as the latter is called an Abscess or Imposthume.

13. And, I think, the Blood grows hot, or breeds an Inflammation, inasmuch as its spirituous, and more volatile and subtile parts, which used to temper the acid and saline ones, presently begin to vanish, when it stops in its distinct vessels, or in any other place, that is, stagnates. Upon which both of them being made more sharp do fight one with the other, and raise a hot effervescence, by reason of the oily parts of the blood, and by little and little so corrupt the blood, that it turns to *pus*, which varies according to the variety of the corrupt blood.

Sylvius de
le Boë.

¶ For the Cure therefore of the Inflammation, and of the Abscess that would then follow, it is requisite, 1. That the Compression or Obstruction of the vessels be removed. 2. That the motion of the stagnating or stopping blood be restored. 3. That the Blood poured out of its vessels may, if possible, be removed thence before its supuration. 4. If it cannot be removed, and so supuration cannot be hindered, that it may be matured and promoted. 5. That discharging the *pus*, when bred, may be hastened. 6. That cleansing and consolidation of the Ulcer may quickly be finished. As to the first Indication and Obstruction, see *Tit. de*

X x

Pleuri-

Pleuritide, BOOK XIV. where one thing should be added concerning Externals, that volatile Salts may be here used outwardly with great success, if at the time of using they be mixt in a small quantity with Fomentations, Cataplasms, Unguents, &c. For the second Indication, Sudorificks are good, as by their help the blood is not only made more fluid, but moreover it is actually put in motion, being more and more rarefied by the volatile Salt that is in Sudorificks. And Venæsection, inasmuch as the next blood comes into the room of that which is let out, and so more room being made for all the blood, it moves both quicker and stronger; wherefore that which stagnated and stopt first in the Vessels, now that the *Pletthora* is removed, stops no more, but renews its interrupted motion. For the third Indication, these things given inwardly hinder the coagulation of the blood, Crabs-eyes, *Antimonium Diaphoreticum*, Mummy, *Sperma Ceti*, *Galbanum*, *Sagapenum*, *Opium*, &c. The Part affected may be anointed with *Unguentum Martiatum*, *de Althæa compositum*, or any other Aromatick, May Butter, and Butter prepared with the Juice of aromatick Plants, adding sometimes aromatick Oils distilled; Among Plasters, this *de Spermate Ceti* is highly commended; Take of white Wax four ounces, *Sperma Ceti* two ounces, *Galbanum* dissolved in Vinegar one ounce. Mix them. Make a Plaster or *Sparadrap*. Which not only preserves the Blood in all external parts of the Body, but Milk also in the Breasts from Coagulation; yea, it dissolves and discusses it, if but gently coagulated. The fourth Indication is satisfied by emollient and maturating Medicines: But when pituitous and viscous Humours are mixt with the Blood, sometimes the Bulbs of Onions, Squills, &c. must be added to them, sometimes *Bdellium*, *Galbanum*, Ammoniack, and the like, liquid *Stirax*, Wax, Turpentine and Honey. Where a great Heat is in the inflamed part, and the Patients cannot bear fat things, we must carefully avoid all Oils and oily things, and I have always observed Butter-milk to be good, in which if a Decoction be made, a Cataplain of it will egregiously temper the Heat, and hinder an *Erysipelas* from following the Inflammation. For the fifth Indication, we must not procrastinate the getting out of *pus* when it is bred. For the sixth Indication, when way is made for the *pus*, we must proceed to cleansing and healing of the Ulcer. For which end I have often seen the effect of *Balsamus Sulphuris Terbinthinatus* with admiration.

Idem.

II. Humours sticking in the Flesh, which are plainly extravasated, cannot run because of their thickness. Let the Physician therefore make them fluid with hot Medicines. Thus an *Erysipelas*, thus every Inflammation is easily removed in the beginning with Spirit of Wine. Yea, if any one ill of a Quinsy, in the beginning of the Disease gargle himself with Spirit of Wine, all the Inflammation of his Throat will cease in three hours time.

Walrus.

III. The Golden Rule, laid down by *Hippocrates*, *A. acut. 12.* and received by *Galen*, must be called to mind in all Inflammations. *Whoever in the beginning of Diseases do endeavour to carry off what is inflamed by Medicine, they do not only get nothing away from the inflamed part, since a crude Disease will not yield; but they do also consume and waste what resists the Disease and is sound; and, when the Body is brought low, the Disease is stronger, which, when it has conquered the Body, has no Remedy.*

IV. But I cannot commend common Repellents, so highly extolled by some in the beginning of an Inflammation; for they are commended only out of prejudice, and the Cure is far more happily performed without them. For though many Patients be cured, to whom in the beginning of an Inflammation Repellents are applied, yet they are not cured by that application, but because other discutient and emollient things were joined with them: for it has been often observed, that by applying

Repellents alone, or in too great a quantity with other things, much harm has been done to Patients, yea, sometimes a Gangrene it self has been raised in the inflamed parts; of which there is no fear, if in our method Repellents be wholly omitted, and the things recommended by us used.

Sylvius de
le Boë.

V. A Woman was struck on her shoulder with a Cane by her Husband, which made the part swell: a Cataplain of Bole Armenick, Barly-flower, Vinegar and the White of an Egg was applied; there followed a Fever, a Pain of the side, a Cough and Difficulty of Breathing. From which I could gather that the matter had run to the Breast, because of the unseasonable application of repelling and cooling things. Whence it is manifest, that *Hippocrates*, *6. Aph. 25.* said right, that it is bad for an *Erysipelas* to turn from the out parts inwards, which holds good also in Inflammations and other Abscesses, especially in the Emunctories and parts near them.

Hildanus.

VI. Many of our Physicians deny that an inflamed part can safely be scarified, holding that more blood runs to the part affected, and therefore think it can doe the Patients no good, which nevertheless I think is vain, when the Body is first well evacuated. For who can doubt, in all Inflammations, or Fluxions of humours, arising from fullness, that two evacuations are indicated, the one of the whole called universal, and the other of the part, upon which the humour falls? In which distinction of evacuations in these Diseases as the universal evacuation of the whole is especially necessary, so afterwards the particular of the inflamed part; for the former respects the Cause, and this the Disease it self. Yea, it is certain that *Galen* commended the use of Cupping-glasses in them, in whom the humour, by the strong attraction they make, might be abundantly drawn to the part affected, and one might suspect the Inflammation or Fluxion might be increased thereby.

P. Alpinus:

VII. As to Scarifying, which *Galen*, *cap. 95. artis parvæ*, thinks may be used, we must observe diligently whether the matter can be changed into *pus* or no: For if Suppuration may be hoped for, there is no room for Scarification: But if the matter cannot be changed into *pus*, and yet there be no hope of discussing it, Scarifications and Cupping-glasses may be applied: for they are an efficacious Remedy to evacuate what is deep within; and which would turn to a *Scirrhus*. Therefore they must by no means be used in the beginning, but when the body has been evacuated, and the Inflammation is stopt, so that there is no fear, that the pain of Scarifying can cause a new Fluxion. And they must be applied then only, when we have a mind to draw out what remains after the use of other Remedies.

Sennertus.

VIII. Yet Scarifying is only proper in those places which can otherwise bear it; for if an Inflammation arise in a part, to which Scarifying otherwise cannot be applied, no man can be so rash, as to apply Cupping or Scarifying to it, for evacuation of the rest of the matter.

Idem.

IX. Tenacious and hard Plasters are not proper for an Inflammation, because they hinder the blood from passing freely to the place, and from turning into *pus*. *Galen*, *13. Meth. c. 5.* shews why hard Plasters must not be used for Inflammations; because they draw together the remainder of the Inflammation, and cause an Inflammation again in the sick part. They weaken the part, because they hurt it by their hardness, and they cause pain while they are pulled off, by causing whereof the humours run thither, and an Inflammation is caused again in the part affected. Moreover they draw together the reliques: for they hinder the blood from going out of the capillary Veins, and if it go not out, it will cause an Inflammation at another time.

Sanctorius.

X. In Erysipelatous Inflammations, which usually invade the Limbs, and put both the Physicians and Chirurgeons to much trouble, I have found no-
thing

thing better at any time, than the following Remedy, which a certain German Chirurgion communicated to the Excellent *Spigelius* for a great secret, as certainly it is; Take of a *Lixivium* of the Ashes of Vine branches 1 pound, Nitre one drachm and an half, common Salt 1 drachm, Vinegar of the best Wine 1 ounce. Make a mixture. Which, after Universals taken up in a double *Splenium*, and tied strait to the part affected with Rowlers, does in two or three days at most wonderfully disperse and waste tumours, which even threaten a dangerous Gangrene.

Sculetus.

XI. *Hippocrates*, in his Prognosticks, has set down many signs of an internal Inflammation in the Belly turning to a Suppuration, which it highly concerns a Physician to know: And this is one of those things wherein skilfull Physicians do especially excell the unskilfull: for many die slowly of internal Inflammations, turning to Suppuration, when they have been thought to have been cured of their Disease, and have been dismissed by their Physicians. For after *pus* is made, and the Pain and Fever are greatly abated, many are thought to have come to an end of their Disease, and to security, who have *pus* gathered inwardly in some Imposthume. Some of whom by the benefit of a strong Nature are cured by breaking of the Imposthume and voiding the *pus*: Others die consumptive, when the *pus* putrefies malignantly, and with it the internal parts, or of a constant Fever, which putrid Vapours, carried from the part to the Heart, do cause: Or the Imposthume breaks, but too late, and when the strength is too low to bear a discharge of the *pus*. Therefore it behoves us much to know the signs of an internal Inflammation turning to *pus*. And many do not know them, because they are not able to discern internal Inflammations, and laying aside all care of latent Ails, they consider nothing almost but what they can comprehend by their Senses, without any ratiocination how to know the parts affected, and to be able to distinguish them from other dolorous Diseases, or the great from little ones: For whether they will cause an Abscess or Suppuration, I know from three things, the Place, Magnitude and Manner of the Inflammations themselves. For Inflammations of hot parts, unless prevented by discussion, do suppurate more than those of colder parts; and therefore, as it is said in the Prognosticks, Swellings in the Belly do imposthume less than those in the Hypochondria, and they least of all, that are below the Navel. Moreover small Inflammations, most of them, are dispersed, especially if they be in hot places: Great ones in hot places indeed do suppurate; in cold ones they remain crude and invincible. As to the manner, they that are round and eminent, circumscribed in a proper place, and gathered into one, signify there will be Suppuration: But they that are extended and broad, and dispersed, do not often suppurate. If they be small, or of thin matter, they disperse: If great, or of thick matter, they have a Crisis by bleeding or by some evacuation, if the event of them be good.

Wallenius.

XII. Unguents are not so proper for Inflammations, unless to promote Suppuration, wherefore Unguents are forbid in an *Erysipelas*, though there be some, by name *Rondeletius*, who prescribe Unguents in this Disease. It is certain also that Ointments improvidently applied to external Inflammations, have often caused a Gangrene. And therefore in Quinies they are not generally so proper as you may find them in Books.

Wedelius.

(See Abscessus, BOOK I.)

Ischiadicus Dolor, or, The Sciatica.

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 Medicines.

I. THOUGH Blood do not abound, if the Disease be inveterate, Blood must be taken out of the *Vena poplitæ* or *malleoli* of the side affected, without all contradiction, because by Bleeding in this Vein a great derivation is obtained; but because it is very difficult to open the *Vena poplitæ*, instead thereof a certain Vein was found by the Chirurgions of Rome, within these few days, which a little above the Heel runs towards the Ankle, to the outside: It is truly a branch of the *Vena poplitæ*, if it be opened, and eight or nine ounces of Blood taken thence, in the very same hour, which is wonderfull, the Pain of the Sciatica, be it never so inveterate, ceases. Bleeding also with Leeches in the hæmorrhoid Veins is admirable good for the Sciatica: for there is a great consent between the Veins of these two places. ¶ *Mr. Puri* of *Newemburg*, a Man of Sixty, sanguine, and, as he himself said, one that took a course to breed much blood, had been confined to his bed six weeks, by the violence of the Sciatica in his left Hip. All the time he kept his bed, he thought there was no need of a Physician, and therefore he sent not for me. At length, being tired by the diuturnity and violence of the pain, he called me. I presently order the most turgid Vein of the opposite Foot (and they were all very turgid) to be opened, the Blood ran full stream, black and thick, to about a pound, with so much relief, that the next day he left his Bed; and the third day after bleeding, his Chamber. I can give a fresher instance of the efficacy of bleeding in the Sciatica; while this is printing, in the Month of April, anno 1681. I am called to a lusty Man about 28 years old, of a sanguine and bilious complexion, well set, and a stout Souldier: He had been confined 15 days to his Bed by a painfull Sciatica in his left Hip: About 18 days before, he had by the advice of a Chirurgion, for revulsion (as he said) opened a Vein in the Arm, but to no purpose: I reckoning the Disease came from abundance of blood settling there, having first loosened his Belly, order a good quantity of blood to be taken out of the opposite foot, and likewise out of the foot on the same side, with so good success, that the next day he went about his business. Anointing with *Unguentum dialthææ*, Nitre and Oil of Elder, which used to doe others good, exasperated his pain.

Zecchius
cap. 43.

II. Many prefer Vomits before Purges, because they evacuate the humours by a way remote from the part affected. *Rondeletius* prefers *Asarum*. ¶ *Sciatica* Pains will not bear purging; for thereby the humours fall more on those places. ¶ But *Sennerius* thinks this must be understood of insufficient purging.

Crato.

III. Sharp Clysters may be given, even to bring blood; for so I have seen them doe some good in the Sciatica.

Crato.

IV. Issues are made in three places in the Leg, in the inside, outside, and hind part of the Calf. Here *Spigelius* used to make an Issue in the Sciatica, with good success, because the *Vena Poplitæ* runs that way. ¶ I must greatly commend a Caustery below the Knee, on the outside of the same side that is affected, for derivation sake.

Clandorpi-
us.
Zecchi-
us.

V. In the Joint of the Thigh, about the cavity of the *Ischii*, the Gout is bred, which they call the Sciatica. If the Humour run into the Acetabulum, and force the head of the thigh-bone out; this Disease, in fight, proves difficult of cure, and will, at length, cause halting; if the Humour fall upon the origination of that great Nerve, which creeps along the back-part of the Leg, a bastard Sciatica is caused, in which a sharp pain reaches, not onely to the Hips, but to the Thigh, the Calf of the Leg, and to the very Foot; that is, whenever the Nerve derived from the Hip affected does reach, as *Kerue-
lius* says; and therefore Pyroticks must be applied to the bending of the Buttocks, and an Epispastick Plaster must be applied there also.

Riolanus.

VI. A falling into a pain of his Hip, and having tried every thing to ease him of his torment, determined to proceed to red-hot Irons, as the last remedy of this inveterate Disease. The courageous young Man gave the Chirurgeon leave, not onely to burn the Skin of his Hip, but to run the Iron through the flesh to the very bone: Endeavouring this way to get out the matter, lying under the *Periostræum*. The Patient bore this red-hot Iron with an excellent resolution of mind; and this cruel Medicine cured him of his Ail, by the continual running of the profound Ulcer, which was kept so long open, till all the matter was evacuated, and there was no fear of a relapse.

Tulpius.

VII. A very fat Man, being taken with the Sciatica, neglecting Universals, ordered himself to be bled in the Foot: And the pains of his Sciatica increasing, made him suspect, that the young Chirurgeon had mistaken the vein. Wherefore the Patient hoping to amend the mistake, and for a mitigation of his pain, called an elder Chirurgeon, who let him blood in a branch of the vein that was opened before: And his pains increasing again, he took the advice of a Physician, who having given him divers things in vain, ascribed the Disease to Witchcraft. By my advice, the Chirurgeon spread three ounces of *Emplastrum vesicatorium Horstii*, on a large piece of Leather; after twelve hours he clipt the Blister with a pair of Scissors, and when a pound of yellow liquor had run out, he applied a Cabbage-leaf anointed with fresh Butter; And this was the first time he could lie on his back and sleep, after he had been four Months without sleep. When the Sore was healed, I prescribed him 1 drachm of *Extractum Esulæ Rulandi* in Wormwood-wine, upon taking of which, the Patient voided much Serum and Bile. To draw out the reliques of the humour from the place which was tolerably pained, at last, *Emplastrum Ischiadicum Noribergensium* was applied; and when after three days it was removed, a Vesicatory, the Patient not minding, was applied in its room, which having drawn a great quantity of viscid liquor, did mitigate the pain so much, that the Patient, when the Ulceration of his Hip was cured, could, between his Wife and a Stick, walk from Table to Table gently. And by continuing the use of *Petroleum* for three months, the contumacious pain wholly vanished.

Aculetus.

VIII. In the process, and when the Body is perfectly purged, Cupping glasses, with much flame, must be applied to the Hip, according to *Paulus* and *Celsus*; for *Galen*, l. 10. de loc. c. 2. has observed, that they manifestly doe good for settled Humours.

Parti.

IX. Although, upon account of the place affect-

ed, every pain in the *Ischion*, may be called the Hip Disease, or Sciatica; yet that properly deserves the name of which *Hippocrates*, l. de affect. v. 25. treats, The Hip Disease is, when pain seizes the joint of the Hip, &c. That is, wherein the Pain is violent in the joint of the Hip, at the top of the Buttocks; and at the muscular eminence under the Buttocks; and when the Disease is confirmed, it reaches to the lower part of the Hip, and along the Leg to the very foot. He says, this Disease grows, when Bile and Phlegm falls by a sanguiferous Vein, and congeals the blood therein, and renders it morbid: whence it comes to pass, that the pain infects more parts, and far distant one from another; because, wherever that morbid blood settles, there it causes pain. So *Hippocrates* advises to use remedies, which, by softening, may dissolve and thin the concrete blood. Whence it appears, how much they are mistaken, who refer the extension of the Pain to the Nerves, which are branched that way by the Spinal Marrow. I know this opinion to be very true, by what I have observed in a certain Man that was sick of this Disease, in whom, while he was affected with the violence of the pain (which came by certain paroxysms) all the veins disseminated along the out-side of the Hip and Leg, swelled in a wonderful manner, and when the pain abated, they fell immediately, and there appeared no sign of them. The Cure laid down by *Hippocrates* is proper for this sort of Sciatica. For by softning and heating he dissolves the blood congealed by the efflux of Bile and Phlegm; and at the same time allwages pain: He loosens the Belly with Clysters, and at one and the same time he dissolves the blood settled about the region of the Hip, and by degrees derives the antecedent matter by the Belly. When the pain is allwaged, he gives a Purging Medicine, to carry off the Bile and Phlegm that cause the Disease: Which he durst not doe before, lest the matter being agitated and disturbed by the Medicine, should be caused of the violence of the pain, run more to the part affected, than would be evacuated. Then he gives Asses Milk, by means whereof the habit of the body may be tempered, and the Humours may be made more gentle. He gives it boiled, that the fluxibility of the Humours may also be taken away. Our people give a decoction of *Guajacum*, or something like it, which may thin and sharpen the Humours, and render them fitter for motion, not onely in this, but in all other Gouts. Then, upon the account of the Pain, he gives Medicines, whose Nature, it is not well known what it is: It is likely they consisted of various things, partly of Diureticks, partly of Strengtheners, and chiefly of stupefying and incrassating things, which were called Medicines for pain; analogous, to which are Treacle, Mitridate, *Philonium*, *Pilul. de Cynogloss.* &c. the heat and driness whereof I correct by diet. The cure of this Disease is so exactly performed by these things, that I reckon all other Medicines needless.

Martianus,
comm. in c.
um locum.

X. If one should use the foresaid cure for all Sciaticas, it would not answer the end; for a different cure is proper for a Sciatica caused by a fixt matter, from that which is proper for one, when the pain runs hither and thither. For as the principal intention in the fixt Sciatica, is, that the matter may be dissolved and got from the joint; so in the other, the principal intention is, to evacuate the Humours which run to the part, and to check their motion. And *Hippocrates*, considering all these things, insists on a far different cure of this Disease, lib. de affect. intern. from what he uses here. For there he gives the sharpest Clysters; here he gives emollient ones: There he orders the Joint to be frequently stirred, which is not necessary when the matter is not fixt: And he orders burning upon the Joint, which has no place in the case preceding, except when the Pain fixes pertinaciously in some one place: Nor does he reckon it always necessary upon the

the joint, but where the pain fixes, and it flies sometimes in one place, sometimes in another. And he burns with raw Flax and Fungi: Concerning which, see Book XIX. Tit. de Cauteriis.

XI. Mr. N. was tormented with a cruel, and almost incurable pain of the *Sciatica* in his right Hip. Divers and very violent Purges were given him; Blisters were drawn, Opiates given, a Vein opened in the Foot, but all in vain; supposing the pain arose from a cold cause, and thick phlegmatick humours. But observing that his Stools were very choleric, and that there was a pulsatile pain and inflammation in the *Abdomen*, I altered my method of cure, betook my self to coolers, and advised drinking of the Waters; hereupon the cure went on with great success, so that in two days the inflammation was gone, though the pain was not quite abated. And when I observed the pain was vagrant, that it sometimes caused a straitness about the *Mesentery*, and sometimes fell from the Hip into the Leg, I supposed the Disease came from abundance of thick and hot blood, which trying to get out, and not being able to do it, creates so great trouble; therefore I advised (and the rather, because I understood, that he had formerly been subject to the Piles) the applying of Leeches. My advice was followed; five Leeches were set to the hæmorrhoid veins; which, when they were full of blood, being besprinkled with Salt and Ashes, they discharged about six ounces of blood. The blood looked red and very thick, void of all Serum. After this, the great pain, invincible by other things, vanished.

XII. The *Sciatica* is sometimes bred of Bile and hot Humours, which indeed may be known, when the Pain is very sharp, and pricking, and the fits are sharper every other day: the party is lean, of a choleric constitution, young, the Countrey and season hot, the pain is exasperated by hot things, and bilious diseases have preceded: Then Medicines must be directed for Bile and a hot intemperature. Therefore then there will be convenient Phlebotomy, Purges for Cholera, sometimes gentle, sometimes strong, adding Diagrydiates, that the morbid matter may be carried off; cooling Juleps, emollient and cooling Clysters, Milk, Bathing, &c. Always taking care to avoid aperients: Incaustics should rather be chosen, such as are proposed in a hot and thin Catarrh; Narcotics, Laudanum, given both at the Mouth, and in Clysters.

XIII. *Hippocrates, lib. de affect.* mentions a *Sciatica* from the driness of the Joint. By Driness, do not understand a dry intemperature of the solid parts, constituent of the Joint it self; but a consumption of its glutinous humidity, whereby it is naturally nourished, and made supple for better motion; If it happen that this humidity be dried up by any cause, then the motion is hindered with pain. *Hippocrates, l. 3. aph. 16.* tells us, that such Diseases come in dry constitutions. He that will cure these Diseases, every external and preceding cause being removed, let him endeavour the restitution of the natural humidity: let him prescribe a Diet actually and potentially cooling; a Bath of Water, with Sheep's Head and Feet, Mallow, Marshmallow, &c. boiled in it, walking gently, and emollient Ointments. Let all sorts of evacuation be avoided.

XIV. A Porter, in violent cold weather, stood with his Legs in Water, for several hours; upon which, a violent pain reaching from his Hip down his Thigh and Leg, took him, so that he could not go. After a Clyster had been given him, he was bled in the Arm on the same side; the next day he took a strong Purge; for three days following he took every morning of *Spiritus Theriacalis* 8 drops in *Carduus Benedictus* Water, which Sweat him violently, and his pain was taken away.

Medicines especially made use of by eminent Physicians.

1. The Herb *Sciatica* Cresses perfectly cures this Disease.

2. One was afflicted with an intolerable *Sciatica*; he applied Nettles boiled in Beer for a Cataplasm, and he was rid of his pain to a miracle.

3. I have not found a better Medicine, than a Plaster of Pitch and Brimstone. Rub the place with Juice of Onion, then strow on it Powder of Pepper and Nitre; and tie on a Sponge, wet in a Decoction of Cumin and Calamint in Wine.

4. This is experienced; Whip the place with a Nettle till it be red, and wash it with Spirit of Wine.

5. St. John's-wort drunk for forty days, cures the *Sciatica* admirably; and if two drachms of its seed be drunk, it Purges the Belly, and cures the Pain.

6. Root of Reed bruised and applied to the pained place, is admirable good, as also Ashes of Reed.

7. Cowes Dung, made hot, and applied, does much good.

Iſchuria, or, Stoppage of Urine.

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Medicines.

I. IF a stoppage of Urine can be removed by

no safe Remedy, but see it be proper, that

is, that the stoppage be not made above the Bladder,

there arises a Question, Whether a Catheter

must be forcibly put in, or the place must be cut as

for the Stone, or an Escharotick Medicine must be

applied, and then a hole made? For always, in

deplorable cases, any way, though not safe, if there

be any hopes in it, may better be tried, than the

Patient be certainly suffered to die. From a

Catheter,

Catheter being forced in, Pains, Ulcers and Inflammations use to arise: An Escharotick Medicine works slower than the occasion requires: Cutting is uncertain, Therefore it is of great moment, that the Lithotomist be skilfull, and the body clean, and it must be considered how full of blood he is, and regard must be had to every excess, yet I saw a Caruncle perforated with a Catheter in N. and good success of it, although much blood and corruption came from it. But if there be a *Callus*, Section is quickest, in unskilfull Artists an Escharotick is safest.

Cardanus.

II. One was much wounded in the *Perineum*, and an Inflammation arose in the wound, he could not make water; but his bladder seemed manifestly to be full and stretched; and lest the Inflammation should be irritated, I would not use a Brais Pipe; but I thought it sufficient to pour warm water on it, and to anoint it with Oil; and when we had treated him so for three hours, the Swelling being not a little relaxed, and the Pain not tormenting him so grievously, I bid him try to make water, in the mean time while we forced, and pressed the Swelling of the Bladder downwards, the young Man made water. And in people that are so taken, the cause of the stoppage of Urine is easily discerned though in others it be not so easily discerned.

Galenus 6.
de loc. aff.

III. The Urine is also stoppt, when there are hard Excrements in the Guts; for the neck of the Bladder is pressed thereby, which being pressed, the Urine stops: And therefore, after a Stool, the Urine comes, when the *Intestinum rectum* is free. One sixty years old, when the passage of Urine had been stoppt three days, and he could make no water, was relieved by a Bath, and after that a Clyster: for when the Excrements were softened and voided, the Urine came. And so he was eased in a few hours, who had been grievously troubled with a suppression of Urine for three whole days.

Dodonaus.

H. a Moini-
chen. obs.
27.

IV. In stoppage of Urine, a Catheter, not dextrously put in, causes most grievous Symptoms; Inflammation, Convulsion, &c. By an error herein I have known sometimes a Suppuration arise in the *Perineum*, which has at length degenerated into a Gangrene, not curable by Art.

V. When Urine is stoppt by an Inflammation of the Bladder, the putting in a Catheter is not without danger; for when it is torn, the Inflammation increases, and when this ceases, an incorrigible incontinence of Urine follows.

Sculetus.

VI. When there is a violent Inflammation of the Bladder, which stops the Urine, we must not use very cooling and repelling things; but before it is stoppt, we must use Repellents for a little time.

Heurnius.

VII. A Man of Seventy, after he had rid some Miles on a trotting Horse, fell into a stoppage of Urine, in which he voided his Urine with difficulty, and drop by drop. When I was called, I observed a tension and hardness in the region of the Bladder, with pain, which was felt onely by pressing it: Besides, the Patient had pains in his Breast, Back and Shoulders, so that he could scarce stir himself: The season was Rainy, and the Wind Southerly. Therefore I guessed all this came from a Catarrh, and that the Humour fell upon the body of the Bladder, and there caused a certain Tumour, by which the Sphincter of the Bladder was compressed, and the passage thereof straitned. Therefore for diversion and evacuation of the fluent Humour, I prescribed a purgative and temperate Apozeme for three days: I drew a Blister behind in the Neck, and applied an emollient and dissolving Fomentation to the region of the Bladder, with a liniment of the same virtue. By the use of the Apozeme his Urine came better every day, so that in three days he made it more freely, and in greater quantity: Afterwards a Bolus was given of Turpentine and Liquorice powder for three days:

A fomentation was applied, an emollient and a more dissolving Clyster was given; A Cataplasim was applied of the residence of the Decoction, with Flower of Beans and Fanugreek, Oil of Dill and Chamæmil, and he was cured with these things.

Riverius.

VIII. One in a stoppage of Urine had his Bladder swollen very much; and when no other remedies whatever would doe good, a Chirurgeon of Paris thrust a Lancet into the very Bladder, through the midst of the Pyramidal Muscles of the Abdomen, which they call *Fallopiani*: But this must never be done, unless the Bladder swell, since otherwise in adult persons it rises not above the *Os pubis*.

IX. A young Man, healthy in all other respects, at first made abundance of troubled Urine for two or three days, and then fell into a suppression of it for five whole days. All Medicines were tried, when Galenical ones would not doe. Thus, when the poor wretch was very much tormented, the unskilfull Physician thought he should doe him a great kindness, if he could procure sleep by stupefying things. And he did it effectually; for immediately upon taking one drachm of *Philonium Romanum*, he fell asleep, and never awaked any more. For Narcoticks increase the Disease, bring a Palſie on the Bladder, and fill the Brain with Vapours.

Rumlerus
obs. 58.
Velschius.

X. Some tye Cotton-wooll to a Silver-wire (which must exactly fill the hollow of the Pipe) and put it into the hollow of the Catheter, and force it with the Pipe into the Bladder. When the Pipe is got into the Bladder, they draw the Cotton-wool tied to the Wire, out of the Pipe, and so draw out the Urine, as by a *Siphon*. But a Cotton is not necessary, because the Urine comes freely by a Spring with holes in the sides; Nor a Wire, because for the foresaid reason it does more harm than good: for while they draw the Wire out of the Pipe, they often draw out the Pipe too, which will be a greater trouble to get in again.

XI. We must have a great care, at that time, when Urine is grievously stoppt, that such things be not taken, as Physicians give to stop Urine: Which, because they are hot and sharp, and sever the serous blood from the gross, do carry much matter to the Bladder. Wherefore they use to put such in mortal and grievous hazard, who, when they have a weak expulsive faculty, use to sollicit it by all means they call Diuretick. And, as grievous and capital an offence as this is, Physicians commonly commit it in stoppage of Urine, by using Diureticks, to move and expell Urine.

Solenander.

XII. A Man of Fourscore was taken with a suppression of Urine, upon his two much drinking of new Wine, and in two months he died: When his body was opened, a great *scirrhus* was found in his Bladder before the neck. But this was observable in him, that though a Catheter were got in with great difficulty; yet I could more easily get into the Bladder with a thick one, which was almost as thick as a Swan's quill, than with a small one. The reason is, because when the Urinary Duct about the neck of the Bladder, yea, and the Sphincter it self was swelled by reason of the *Scirrhus*, a coarctation and straitness of the Urinary Duct in the *Perineum* must of necessity follow. Therefore it is consentaneous to reason, that a little small Catheter could not dilate this narrowness, which a thicker could easily doe.

Hil Ianus.

XIII. Sometimes we can neither prevail by Medicines nor Catheters, so as to be able to get out the Urine, which has stoppt many days, because of some fault in the Urinary Duct, the Man continually haſting to his end. Why therefore should you think it hard, by a dextrous incision, to make a small hole, where they cut for the Stone. *Articulus comm. ad Rhazen. c. 103.* laid down this cure. Which thing, in the extremity of the Patient, and in cases, when other remedies will doe no good,

Severinus. I would advise you not to reject, nor speak ill of.

XIV. *Cardan. com. 43. aph. sect. 7.* testifies, he saw a case succeed very well, when a Caruncle in a certain Man was perforated with a Catheter, though much blood and corruption ran out of it. And I experienced the same in a Barber, who had been two days ill of a stoppage of Urine: For while I thrust a Catheter against the renitent Caruncle, first a little blood came, and then abundance of Urine, and he finds himself well to this very day.

Idem.

XV. A Boy eight years old was ill of the Small Pox; he complained of a stoppage of Urine: We were puzzled what should be the cause: We saw the Small pox on the end of the *Penis*, and we thought there might be some within: We gave inwardly things to provoke Urine; We were then hindred from Bathing and Fomentations by the Small Pox. When we could do nothing, I look on the *Penis*; I saw something white in the Orifice; I took it for a Small pock full of Pus: I take a Needle, I find it hard, I move it, and when moved, I get it out, it proved a Stone, and the Urine came. It had been forced thither by expelling Emulsions, that are used to be given in the Small pox, which are also Diuretick.

Wincelerus,
Mysc. cur.
ann. 74. obs.
36.

XVI. An Infusion of *Cantharides* is a remedy for a stoppage of Urine, the happy success whereof I have several times experienced. Let a scruple of *Cantharides* in powder be infused in three or four ounces of Rhenish-wine, or of Spirit of wine for some days; then let it be filtered through a brown Paper, that nothing of the substance of the *Cantharides* may be mixt with it. Let one Spoonfull of this liquor thus strained be mixt with other seven spoonfulls of Wine or Beer. And, of this mixture let one Spoonfull be given the first day, two the next, and so on.

T. Bartholi-
nus, cent. 5.
hist. 82.
Ep. 34. cent.
4.

XVII. N. A Nobleman, Sixty years old, sanguine, of an athletick habit, when he travelled in the heat of Summer, quenched his thirst, contracted from the Heat, with abundance of drink. Four days after he came home, he fell into a perfect Iſchuria, which was variously opposed by an old Physician, yea, a Catheter was put into his Bladder. I was called, I asked him, whether he felt any pain in his Loins or *Pubes*, or if he had been troubled with the Stone in the Kidneys? He said No. Hence I gathered, the Iſchuria proceeded from no fault in the Kidneys, or Bladder; but rather from an obstruction of the Emulgents, which a multitude of Humours had caused, by reason whereof, the Vessels being too full and distended, could not contract themselves for expulsion; Which appears in the Bladder, distended beyond measure, by too long keeping the Urine, which sometimes very difficultly voids the Urine, through want of contraction. I insinuating on this opinion, proposed Phlebotomy to be celebrated with a liberal hand, to take away the plenitude of the Vessels: And one pound of blood was taken away. Scarce an hour was over, when the Patient perceived the Urine run by the Ureters from the Kidneys to the Bladder, and he foretold he would make some quickly: A little after he called for a Pot, and when he had filled that, more were brought; so that in an hours time he made several pounds of water. Thus he was perfectly cured, and would not take a Hydragogue, which was prescribed him the next morning.

Riverius.

XVIII. For such as by long holding their water, or drunkenness, cannot make water, though they strive to do it, I have found out an easie way, and have practised it several times with great success, by putting a Wax Candle, such as Shoemakers use, through the *Urethra*, into the cavity of the Bladder, if it be first made blunt at the end, and anointed with Oil. I use this instead of a Catheter, which,

because it cannot be thrust, into Males especially, but with much difficulty, or pain, in imitation of it I have tried this Candle, and have observed the success to be excellent. Which Artifice is so much more to be valued, because this is always in readiness, and such a Candle may be used by any one; whereas a Catheter cannot be put in but by a skilfull hand, and then indeed with trouble.

Sylvius de le
B. 6.

XIX. I think sometime the suppression of Urine may be owing to the blood for its cause, that is, when this is so affected, and so confused, and mixt, as to its various parts, that the Serum cannot be separated in the Kidneys. Which perhaps falls out oftner, than the Caruncles of the Kidneys are indisposed, especially when no fault is observed in the Kidneys, though they be most found fault with. And certainly, that the blood may be so affected it self, that the serous parts, which minister matter to Urine, are so intimately mixt with the rest, that they cannot easily be parted, many things seem to persuade me, whether a Man consider the Symptoms, then urgent, or weigh well the method of cure by volatile Salts. For, to say something of volatile Salt alone, and not without good reason, because of the manifold experience I have of its virtues; it is certain, that it has the faculty of dissolving any viscid humour, from which the vitious connexion of the Fluid parts, as well as the Solid, has usually its rise: Now when the viscid humour is dissolved, the parts of the blood may more easily separate, when they are not so intimately conjoined one to another. But, if any one think, if the suppression of Urine, which is so often mortal, must be ascribed to a viscid humour in the blood, which hinders the separation of its parts, that then the obstruction of the Caruncles in the Kidneys, whatever it is, may not inconveniently be derived from the same viscosity, hindring the secretion, or transcolation of Urine, and causing a suppression of it, I shall not contend with them, but do rather think, that both causes should be joined, and often are joined; so that by the viscosity of any humour in the blood, both the rest of the parts of the blood may be intimately tied one to another, and so be made less fit for their separation, and the pores of the Caruncles may be obstructed, and so the transcolation, secretion, and excretion of Urine may be abolished.

Idem.

XX. I have often removed small stones, got into the mouth of the Bladder, by putting in a Wax Candle, the way I mentioned before, *Section XVIII. Idem.* and so I have cured the stoppage of Urine.

XXI. When there is suspicion that a Stone sticks in either Ureter, unless by turning the body, the head downwards, and then by shaking of the body, the Stone be got back from the Orifice of the Ureter, this disease must be held for desperate.

Idem.

XXII. Oftentimes the cause of the stoppage of Urine is thought to be in the Kidneys themselves, inasmuch as the Natural constitution of the Kidneys, and of the Caruncles in them, whatever it is, and the disposition requisite for separation of the Urinous Serum from the rest of the blood is spoiled, so that the secretion ceases. Here we must make haste to cure it, while there is some hope. This Disease may be cured chiefly by taking Diureticks, especially volatile Salt of Amber, and other Aromatick volatile Salts: By means whereof so grievous, and often so mortal a suppression of Urine, wherein the sick are sick at the heart, is not onely cured, but prevented.

Idem.

Medicines eſpecially made uſe of by eminent Phyſicians.

Bikkerus.

Crato.

1. Syrup of Cryſtal is admirable in this caſe, which is made thus; Take of prepared Cryſtal a ſufficient quantity; diſſolve it in juice of Lemons. Boil the Solution with Sugar into the form of a Syrup.

2. This emulſion is excellent; Take of Seeds of Purple Violet half an ounce; with a ſufficient quantity of Speedwell-water, make an Emulſion.

3. Fried Pellitory of the Wall applied, is an eſſential Remedy. Jac. Sylvius.

4. Root of Knotgrafs drank with Water is very good; as alſo the Seeds and Leaves of Trefoil boiled in Water and drank. I have often experienced the Powder of the Jaw-bone of a Soufed Pike.

Varignana.

5. Let two or three heads of Garlick be boiled in White-wine; add a little Treacle and Mithridate. Give an ounce and an half in drink. It preſently provokes Urine.

Villanova-nus.

A

A GUIDE TO The Practical Physician.

BOOK X.

Of Diseases beginning with the Letter L.

Lepra Arabum, or, The Leprosie of the Arabians.

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Cured by Salivation. XI.*

I. **T**HE Leprosie must be cured a far different way from what it was of old. For when it is distinguished from what antecedent matter it proceeds, and how long it has lasted, whether it be beginning or inveterate, Remedies must be insisted on according to the diversity of the humour which caused it. One beginning, in which the signs as yet appear but obscurely, in whom no Exulceration, nor any Swelling appears, and about the Face especially, will be cured by Bleeding first, then by taking an Electuary made of cooling and lenient things; it will be cured also by frequent use of Baths hot and cold. But that which has manifest signs, as where Exulceration of the Nostrils, and fleshy Tubercles appear, when the Blood comes out at the Nose, must be no more cured as one beginning: For in this, Blood must not

be let in the greater Veins, lest the Blood, that is as yet laudable, contained in them (which we ought to preserve with the greatest care) should be let out: because it is a curb to all the Humours, by its temper tempering all the rest, and reducing them to moderation. Wherefore since there is but a little blood in a Leprosie, it ought to be saved by all means possible.

II. Such Medicines must be used for Purging, as particularly purge the peccant humour. Such therefore are not sufficient as purge any humour indifferently, as Antimony chymically prepared, which by vellicating or rather ulcerating the Stomach, evacuates what humours it finds. If this be given, it must be at first, before other Medicines, to diminish the abundance of Excrements. The Dose may be three, four, or five grains, according to the Patient's strength, with half an ounce of Sugar of Roses; and this must be taken, when the Stomach is full of meat, and the Body (according to Hippocrates his rule in taking Hellebore) well stirred before. Afterwards a Syrup may be taken which may correct the error of the Antimony, and may purge the humour particularly, made of Borage, Cichory, Endive, Scariola, Lettuce, Violets, Lentils, Polypody, *Carthamus*, Senna, Dodder of Time, which must be used for several days, that the antecedent matter may be carried off by continual and frequent purging, and may be averted from the flesh and habit of the body by the inner parts.

III. Our Practitioners are much to be blamed, who having first given gentle Purges, do by sudorific Medicines and by opening and inciding Syrups, send the matter to the Skin, whereas the Disease is in that part; for this is to carry the excrements to the part affected, and to increase the Disease; it is better therefore to derive the matter by the Inwards. This is a Disease of the outer parts, of the Skin especially; In such cases let the excrements

Rondeletius

Idem

of the body be retracted, and be purged by the belly: let them be expelled from the external parts to the internal by bathing in cold water: for since it is a Disease in the Skin and the Flesh, the excrements must be kept away.

Idem.

IV. *Palmarius* upon *Fernelius* his authority and his own experience disapproves of *Vipers*; because he gave them to leprous persons, without any benefit. *Poteries* says he has used *Vipers* in Leprosies, without any benefit, though taken a long time. He says indeed, an old Itch has been cured by taking them for a long time.

V. Many send their Patients presently to the natural mineral Waters, but because they dry much, much harm often arises from them, especially in the beginning of the Disease, while heat and driness are prevalent; and a Bath of cold water is more proper.

Sennertus.

VI. It is proper to hinder exsiccation, because the essence of it consists in driness. The blood is ferrous and salt, and therefore cannot be assimilated to the parts nor nourish: for the end of nutrition is assimilation. Therefore Women, Children and Eunuchs are seldom troubled with this Disease; for they are moister, and so better resist driness. *Aëtius* says many have rid themselves of this Disease by being gelded. By this means I cured a young Man this year, who was begun and gon a little in this Disease.

Rondeletius.

VII. A red-haired young Man and cholerick came to me, with his skin torn into deep clefts all over his body. All my life time I never saw a Man more leprous: He had taken seven courses of a decoction of *Guaiacum*, forty days at one course; upon which he fell into a perfect Leprosie. He having a very hot Liver naturally, which was turned almost to ashes with so many hot Potions, I prescribe him the use of Mountain Crystal prepared, to take half a drachm every morning with Juice of leaves of Water-lily, Currants and Barberies (industriously avoiding Sugar and sugared things) drinking after it some Whey, with a little *Sal prunella*. Then I laid him on a straw bed, deep under a Mill, to receive upon his body the dropping of the very cold water, not heated either by motion, or the heat of the Sun. And when he had done this for an hour and an half before Supper several days, he grew sound and very well.

H. ab Heer, Obs. 22.

VIII. Mr. *Schipanus*, a Physician of *Naples*, told me that Prince *Caraffa* used to eat the flesh of the Foal of an Ass for the Cure of the Leprosie. Some think Asses flesh causes it, as *Ballonius*, l. 2. *Ephem.* p. 187. This indeed is hard of concoction; but the Flesh of the Foals is better and more tender, which therefore *Hippocrates*, 2. de v. rat. says does quickly pass: And it may be for that reason it cures the Leprosie; or by its tenacious aliment it amends the fault contracted: for, according to *Pliny*, l. 18. c. 17. Asses flesh is good for consumptive persons.

T. Bartholinus, hist. 33. cent. 6.

IX. One that was troubled with this took several Medicines to no purpose; he took white Hellebore. At length he recovered by taking Cucumbers. He ate them pickled all the year round.

Hentnius.

X. The Leprosie, above all other chronic Diseases, requires variety and vicissitude of Medicine: And in this Disease, if in any, a truce and intermission from all Medicines must often be allowed the Patient. Then the same things must be repeated, and new ones added. For scarce ever any Man recovered, who relied on one only Remedy, though never so generous.

Palmarius.

XI. In the year 1675. in the month of September, an Italian by Nation was suspected of a Leprosie. Abundance of Scurf fell all over him, he was hoarse, had a stinking Breath, and was very lean. He had taken a vast deal of Medicines; at length Salivation was prescribed him, but a Diet first of *China* and *Sassa*: And in a short time he perfectly recovered, though the Disease had got a head.

Lepra Græcorum, or, The Leprosie of the Greeks.

(See Habitus Affectus, BOOK VIII.)

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I. THE material cause of the Scab, or of the Leprosie of the Greeks is not merely a cutaneous humour, because of Infection taken from without, or because it is depraved and degenerated from its crasis upon other occasions: but the Puslules at first arising about the beginning of the Disease seem to arise from hence, that some acidosaline Concretions (like Tartar in Wine) do happen in the mass of blood, which when they cannot be conquered nor dissolved, are driven here to the Skin, as in the other case to the sides of the Cask. In respect of the conjunct Cause there are two special Indications of Cure, namely, that the Impurities of the bowels and humours may be quickly purged, and that the acidosaline Dyscrasies of the blood may be regulated: for which ends Medicines both evacuating of divers kinds, and altering, use to be prescribed. Yet because not all, but only the great Remedies in a manner are used, we shall therefore subjoin in this place, those that are most usefull, and are found to be most beneficial. First therefore, when universal Purgation and Phlebotomy have been used, the following Infusion or cathartick Tincture may be given, six or eight ounces whereof may be given and repeated once in six or seven days; Take of root of sharp pointed Dock dried, Polypody of the Oak, each half an ounce; *Senna* ten drachms, Dodder of Time six drachms, Rheubarb, Mechoacan, each half an ounce; yellow Sanders 2 drachms, Celtick Spike half a drachm, Salt of Tartar 1 drachm and an half. Put them into a Glass with 4 pounds of White-wine; keep them for use; pouring off as much of the clear liquor as you shall have occasion for. You must add two pounds of Elder-flower water.

Willis.

II. For sweetning of the Blood, and washing its Salts, Whey either simple, or with fumitory, Cichory, or sharp pointed Dock infused in it, may be drunk, two or three pounds of it every morning, for twenty or thirty days, if it agree with the Stomach. And besides, a Dose of the following Electuary may be taken morning and evening; Take of Conserve of root of sharp pointed Dock 6 ounces, Crabs-eyes, prepared Coral, each 2 drachms; Ivory 1 drachm, Powder of *Lignum Aloes*, yellow Sanders, each one drachm and an half; *Sal prunella* two drachms, Vitriol of Mars one drachm and an half, Syrup of Juice of Wood-forrel what is sufficient. Make an Electuary. The Dose two ounces.

Idem.

III. For the very same reason that Whey, Iron-waters also are prescribed in this Disease, and they often

often doe good: for when all other Medicines have been given to no purpose, I have often cured a grievous Scab, which has almost been leprous, onely with these Waters. Moreover, for the more efficacy, *Sal prunellæ*, or *Vitriolum Martis*, or a little of the foresaid Electuary may be given conveniently.

Willis.

IV. In some that have too much *Serum*, and ase of a watry constitution, when drinking of Whey or the Waters are not so proper, it may sometimes be convenient to give a Decoction of the Woods at medical hours; and moreover, to take them constantly for their ordinary drink; Take of Wood of Willow half a pound, root of *Sarsa parilla* 8 ounces, white Sanders, Wood of Mastich-tree, each 2 ounces; shavings of Ivory, of Hart's-horn, each five drachms; Tin, crude Antimony, each four ounces tied in a Cloth; Liquorice one ounce. Infuse them and boil them in sixteen pounds of Spring-water half away. Keep the Colature for use.

Idem.

V. Chalybeate Medicines, because they are reckoned among the more efficacious Remedies, must seldom be omitted in these Diseases, though they are not often given with much success: for most Preparations of Steel, in which the sulphureous Particles prevail; inasmuch as they ferment the Blood and put it into critical effervescencies, do rather increase than diminish the impetiginous eruptions; nevertheless, the Salt, Syrup, Tincture and virriolick Infusions, as they fix the Blood, and check a little the efferations of the Salts, do suit well enough the Intention now proposed; but those that are not so strong can doe little good against so Herculean a Disease.

Idem.

VI. Wherefore when these and most other Remedies will doe no good, many commend Salivation as the stoutest Champion, and the onely one able to cope with so stout an Enemy; But the event does not always answer expectation: for I do confess, I used this Remedy for four persons who were troubled with a grievous Itch, which was obstinate to all other Remedies, without any benefit. One of them by anointing with Quicksilver, and the other by Pills of Solar Precipitate bore plentifull Salivation for about twenty days, in which time all the Scurf and Wheals vanished; nevertheless, to confirm the Cure, a diuretick Drink of a decoction of *Sarsa*, and often Sweating, and convenient Purgings between whiles, was continued for a month: And yet for all this, when this course was at an end, and when no signs of any Itch appeared, within another month, the Disease began to bud out again anew, and in a short time grew to its wonted maturity. Moreover, when one of these had repeated this Medicine, and another after two Relapses had a mind to try it a third time, both of them, after they had undergone so much, despaired of any Cure. Whence it is evident, that the Venereal Disease, though it be extremely malignant, and cause most foul, cacoethick Ulcers, that eat the Flesh and Bones, may more easily and certainly be cured than the Itch. Wherefore not undeservedly did the most famous Physicians of old reckon this Disease, when confirmed, and brought near to a Leprosie, to be very difficultly, if at all, curable.

Idem.

VII. And an event no whit better attends this Disease, when it comes upon an inveterate Scurvy; perhaps indeed the Intentions of cure may be more certainly gathered, when the Scurvy is the basis or root of this Disease, to wit, to take the primary therapeutick Indication from thence, and insist chiefly on antispasmodick Medicines. But even of this sort those that are sharp and hot, as Scurvy-grass, Water-cresses, Horseradish, Pepperwort and other things that incite the Blood too much, as they dissolve the *Crafs* of it more, and force the coagulating Tartar in more abundance to the Skin, they are always found to doe more harm than good. And

for this very reason the use of Baths, or Bathing in hot waters, which evacuates by abundance of Sweat the Humours of the whole body, and cleanses the Pores of the Skin, though it may seem very good in this Disease, yet it is so far from relieving, that the Breaking out is usually increased and exasperated thereby: For I have known several who, not being very itchy, have gon to Bathe, and there bathed in the hot water, and have returned from thence quite leprous. Wherefore whenever this Disease is a supervening Symptome of the Scurvy, let all sharp and elastick things be avoided, and onely the more temperate ones be given, endued with a nitrous, or virriolick, or a volatile Salt. The nitrous Salt is predominant in *Crysalum minerale*, some Juices of Herbs or Decoctions, and in some purging waters.

Idem.

VIII. The Cucumber is endued with a nitrous virtue, and by experience is found good against this Disease, wherefore instead of Sallet it may be eaten plentifully and often. Moreover, let three or four of them be cut into Slices, and be infused in four pounds of Spring-water cloie for a night; to the clear liquour poured off add of *Sal prunellæ* two or three drachms. The Dose half a pound three times or oftner in a day. For the same purpose also Decoctions of the leaves and fruit, made in spring water, are proper.

Idem.

IX. Some cathartick mineral waters, especially North-hall waters, if you make an *Analysis* of them by evaporation, do manifestly shew the nitrous Salt wherewith they are impregnated. And I have several times found, that the constant drinking of about four pounds of them every day for a pretty while together, has done good in a slight Itch.

Idem.

X. But Waters impregnated with a virriolick Salt, such as the *Spaw*-waters, do far excell these nitrous ones and any other Medicines, and doe far more good in curing the Itch. To such as have not an opportunity to take them I give common water, impregnated with our Steel, and so exactly resembling *Spaw*-waters, for this Disease, and with good success. Because of their mineral Salts or at least some Mercurial Particles in them, Tin and Antimony are in Vogue for curing the Itch, and several use to prescribe them with other Medicines. Raspings of Tin and Powder of crude Antimony may be infused in Beer for the ordinary Drink, and they may be put into a Decoction of *Sarsa* and the Woods, for this Disease.

XI. The Viper and its Preparations do sufficiently set out the excellent virtue of a volatile Salt in curing the Itch, yea the Leprosie it self. *Galen* reports, that this Medicine for this Disease was found out by a casual experiment. Hither also may be referred the analogy taken from the nature of the creature, whence it is gathered, that it does good in this Disease; for since the Viper every year casts its scaly slough, therefore any one might think that its parts would be good to cast off the crusty skin in the Leprosie. But not to attribute much to such things, since it is apparent from frequent observation that viperine Medicines are good in the Itch and Leprosie, the reason of the Cure must be ascribed to the volatile Salt, with which this Animal abounds: For the Particles hereof do destroy the fixt and acid Salts, which are prevalent in the diseased, and dissolve their Combinations. Notwithstanding, the Salt, Spirit and Oil chymically extracted from Vipers, by reason of the empyreumatick and exceeding elastick Particles which the Fire produces, are not at all proper in this Disease; as neither the Spirit nor volatile Salt of Hart's-horn, Soot, Blood, and the like Ammoniack Spirits, because by exagitating the blood and humours, above measure, they cause their *Crafs* to be more dissolved, and drive the corruption more to the Skin. Wherefore the simpler Preparations of Vipers, as a Decoction of their Flesh in water, Drink impreg-

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nated

nated with their Infusion or Decoction, their dried Powders and Electuaries made of them, may be advantageously prescribed against this Disease. Moreover, not only the Flesh of Vipers, but of other sorts of oviperous Snakes, boiled and eaten for food, often doe abundance of good.

XII. The Itch, or scurfie eruptions of Wheals in bunches, is so frequent and familiar a Symptome of the Pox that the first thing I ask such as are ill of this Disease is, Whether they be not conscious of some latent malignity? And if I find it so, I let alone all Specificks for this Disease, and Antiscorbuticks, and immediately proceed to a Decoction of the Woods, which if it doe no good, I proceed to Mercurial Medicines. And indeed by this method I have with ease and speed cured several, who were reckoned impetiginous and leprous, after they had been long treated to no purpose with remedies appropriate to these Diseases, and miserably tormented.

Willis.

XIII. The second curatory Indication, respecting the Disease it self, and the primary Symptome, to wit, the scurfie Eruptions and Wheals, prescribes topical Remedies to be applied to the external Skin, for the Cure of these Ails: For which end Baths and Liniments especially are good; which yet, unless the procatectick Cause, i.e. the tartareous disposition of the Blood be first purged out, doe seldom, if ever, any good of themselves. Among all which, Baths or Liniments made of Tar are by far the best; so that indeed they onely should be used, but that they smell so strong. Therefore it is usual, for Baths to use water kept in Tar-barrels for a while, and impregnated with the Infusion.

Idem.

XIV. Sulphureous Baths, both natural and artificial are not proper: for that the former often doe harm, frequent experience testifies: yea, all Bathing whatever must be used with much caution; for inasmuch as this administration stirs and heats the blood, it is in danger (as I said before) to dissolve its Crasis farther, and to force the corruption more to the Skin.

Idem.

XV. Liniments, whose use is safe and proper, are of three kinds or degrees, gentle, moderate, and strong. 1. In a slight Itch, where the Eruptions and Wheals are few and small, fasting Spittle is commended, also the liquor that sweats out of green Wood, when it burns, also bare rubbing with Dock roots bruised and steeped in Vinegar; Take of Oil of Tartar *per deliquium*, Oil of Nuts or of bitter Almonds, each equal parts. Make a Liniment. Use it twice a day. The second sort of Liniments use to have Tar in them; Take of Ointment of Roses six ounces, Tar two ounces. Melt them together and mix them. Take a piece of fat Mutton, lard it with pieces of the root of sharp-pointed Dock, rost it on a Spit. Baste it with Tar continually dropping upon it. The dripping of both must be saved for an excellent Ointment for the Itch. The most effectual Liniments against this Disease are Mercurial ones, which are made of Quicksilver or Precipitate. A Receipt for the first is this; Take of Quicksilver killed with an Acid one ounce and an half, new Hogs-lard six ounces. Incorporate them well in a stone Mortar or a glass one. For the other; Take of white Precipitate three drachms, Ointment of Roses three ounces. Mix them. Anoint the parts most affected.

Idem.

XVI. The use of these in this Disease ought to be much suspected; for if Salivation should be raised, a vast quantity of matter impacted in the pores of the Skin would be moved, which if it should fall too much at once on the salival ducts, and should gather about the Throat, it would endanger choaking.

Idem.

Lethargus, or, A Lethargy.

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I. *Galien*, 13. *Meth.* 21. approves of Bleeding; and most men follow him: for so a proper revulsion of the Humour is made, that it flow not to the Brain, which being affected with heat and pain, is easily susceptible of the fluxion and draws, whereby the Inflammation of a Noble Part is prevented.

II. I think the jugular Vein should rather be opened than one in the Arm, because by this means the blood being much gathered in the *Sinus* of the Head, and it may be stagnating, will more easily be reduced to an equable Circulation.

III. Though a continual Fever accompany this Disease, yet the Physician need not be over tardy or timorous, when matter tending to the Head is very urgent. For it is more advisable to evacuate it, when it is in motion, than when it is fixt in the Head, and settled there: And the danger permits a man to try something. And if it happen that the Lethargy come upon a *Crisis*, the Humours which produced the Disease running to the Head, and if the precedent Fever abate, then we need not much regard the whole or the Fever, but we must have respect to the Head, and prepare the matter settled there.

Scenertus.

IV. Before you pitch upon purging Medicines, consider whether the ascent of the Humours to the Head come rather from Bile carrying the Phlegm, than from the abundance of Phlegm it self: for if the first, although the Disease seem phlegmatick, you must purge with Colagogues, for exclusion of the Bile, which carries Phlegm to the Brain. *Oribasius* saies, that nothing is so good for purging of Phlegm, which Bile mixt with it has carried to the Head, as Scammony given with Castor. If you find Phlegm predominant, as in most spurious Fevers, and when a Lethargy begins, you must doe the business with Phlegmagogues.

Mercatus.

V. Here we must consider whether we must purge or vomit in the beginning. I know this is variously controverted among Authours; and I have known it practised with various success, which things considered and compared one with another, I will briefly give you my opinion. If the Lethargy come from Surfeiting or Drunkenness, or from taking incongruous things and Narcoticks, a Vomit must be given presently: Wherefore let Salt of Vitriol be given with Wine and *Ozymel* of Squills; or in strong persons an Infusion of *Crocus metallorum* or *Mercurius vitæ*, with black Cherry water; and afterwards, if it work not of it self, Vomit must be provoked by putting a Feather down his Throat. But if the Lethargy come upon a Fever or other cephalick Diseases; or if it be caused primarily, or by it self by some predisposition laid in the Blood and Brain before, Vomits and Purges given at the beginning, while the matter is in flux, often use to doe more harm than good: Inasmuch as, when the Humours are in motion, they disturb them, and when they cannot be brought under and carried off, they drive them more into the part affected.

Willis.

VI. If

VI. If the Disease continue, and the Patient can hardly be awaked, the use of Sternutations is very proper; yet we must not persist continually in them, lest they thin and move the Humours too much. At the beginning of the Disease especially, we must abstain from them. They are bad also when the Fever is high. They may be used when the Lethargy begins of it self, or when it takes one lying in bed, and in the declension.

Sennertus.

VII. I have known the most good from a Blister, above all other Applications, when it has run well all over the Head. I saw two Lethargick persons cured chiefly by this Remedy, after the Disease had continued a long time, and had not onely destroyed the memory, but much impaired the understanding: For because the excoriated places in both of them would not easily heal, they ran a great deal of thin Ichor, namely, every day about half a pound.

Willis.

VIII. Fumes which some use to raise the lethargick, are not proper in this case, because they fill the Brain much: It is better to make a Decoction of Pennyroyal, Rue, Mother of Time, Hyssop, wild Majoran, boiled in Vinegar, adding a little Castor, and to receive the Steam of it at the Nostrils.

Sennertus.

IX. The Ancients held the Cause to be Phlegm gathered in the Head, which by its Moisture and Cold caused the Stupefaction, and by its putredinal heat waking; But this is impossible. The Cause is rather a narcotick Vapour, elevated in the concomitant Fevers, whether a quotidian, continual, bastard-tertian or semi-tertian. Or if it came without a Fever, it is phlegmatick Blood, that causes the Inflammation: For, as *Forestus* observes, there is often such an Inflammation as turns to a Gangrene. And so the Cause of the Lethargy is twofold. *Hippocrates*, *l. de Morb. sect. 3.* places the seat of the Lethargy in the Lungs, and he judges that it does not much differ from a Peripneumony, affirming that the Cause of a Peripneumony is bilious blood; of a Lethargy pituitous.

X. The Ancients used strong and hot Preparatives as well as Purgatives, so that it appears, they little regarded the concomitant Fever; and it was on this ground, because they thought the Fever was onely symptomatick, and followed the Putrefaction of Phlegm in the Brain, which being removed, the Fever ceases. But seeing the Fever is not onely symptomatick, but narcotick Vapours ascend from the febrile matter into the Head, and the Heat puts the Phlegm in the Head into fusion; or Phlegm runs out of the whole Body into the Head, the Fever ought not to be neglected: And according as it is more intense or remiss, so Medicines, which are otherwise good in a *Carus*, must be so tempered because of the Fever, that the danger, which otherwise is imminent, be not doubled, when the Fever is increased with such Medicines.

Idem.

XI. Because of the cruel nature of this Disease I propound a new sort of Remedy, i. e. an Issue or Seton in the Neck; in those Lethargies, that is, which are of long continuance, or come by Fits, because such are the Forerunners either of an Apoplexy or an Epilepsie. Therefore in a *Carus* or *Catalepsis*, I reckon an Issue in the Arm a good Remedy, both for Prevention and Cure: But in a Lethargy, because it is an Inflammation, and short Disease, certainly it can doe little good; as neither in such comatous Diseases as have a concomitant Fever, or are caused by Sympathy.

Mercatus.

Medicines especially made use of by eminent Physicians.

1. Savory often infused in Vinegar, and applied to the Head, or drunk with Wine, raises the most Lethargick persons.

Altomari.

2. Give Spirit of Citron, and it will afford present Remedy.

Hæserus.

3. Castor in the Cure of a Lethargy is preferred above most other Medicines.

Sennertus.

4. A Squill sometimes alone, or Mustard bruised with Vinegar, laid in manner of a Cataplasim to the Hips, is able to raise any Man from a dead sleep.

Trallianus.

5. One ordered a Hog to be hung by the Heels before the Patient, who hearing the continual noise and crying of the Hog that hung by him, was so terrified, that he could not sleep. ¶ Another ordered the Patient's Head to be shaven, and to be anointed with Honey, and the Flies so troubled him, that he was not able to sleep: And so he was cured.

Villanovanus.

Lienis Affectus, or, Diseases of the Spleen.

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What such the Unguents for a hardened one ought to be? XXX.

Medicines.

I. IN an Inflammation and other Diseases of the Spleen, which a gathering or preternatural motion of Blood to that place does cause, Blood-letting is therefore prescribed, that the abundance of Blood gathered in the Spleen may be diminished, and that what still runs to the same part may be retracted to the opposite parts, and as far distant as may be: For so a Cure is used for the said Diseases, according to *Hippocrates* his rule, by Contraries. But this Contrariety, whether you evacuate, or especially if you make revulsion of the blood, which runs in abundance to some part, must not be reckoned by the resititude, as they talk, or rather (to speak more properly and truly) by the continuity of the fibres of the vessels common to those parts: This is the *Kat' isyn* of *Hippocrates*; for revulsion can scarce be made by an absolutely straight way, because the Blood must of necessity pass through the windings and turnings of the vessels. The resititude

itude therefore, or continuity of fibres, and community of Vessels must be regarded: for without the community of Vessels, it cannot be said that there is a rectitude, or continuity of fibres. Yet I cannot but admire how so many excellent Physicians, from Hippocrates to this very age, could think they understood, in what manner revulsion was made from the Spleen by bleeding in the left Arm, since the rectitude, that is required, cannot at all be found here, the Liver hindring that, in which the capillary branches of the *vena porta*, and the *vena cava* are wonderfully implicated, and are connected by their small ends, or do mediately communicate. Whoever considers this accurately, will easily discern, according to *Galen's hypothesis*, who will have the blood carried from the Liver, by the Veins, into all the parts of the body, that revulsion is not better made by bleeding in the left Arm, than in the right: For, according to this *hypothesis*, revulsion cannot be made of the blood from the Spleen, unless as it is drawn from the Liver. But blood is easier drawn from the Liver by Venæsection in the right Arm, than in the left: for *Galen* and his followers prescribe it. From these things it manifestly follows, that these great Men either ineptly rejected the Circulation of the blood, or ineptly prescribed bleeding in the left Arm, for making revulsion from the Spleen. If a Circulation of the blood be admitted, it is easy to demonstrate, that bleeding in the left Arm is the most commodious for evacuating of the Spleen, when it is distended with too much blood, or for revulsion from it, when the blood runs over-much to it. For when this is opened, it is the same thing as if the Artery were cut, whence the opened vein receives its blood; for the blood is the same, and comes from the same fountain. And who knows not that the fibres of the Arteries are continued from the Splenic Artery by the *Aorta* to the Artery of the left Arm. The rectitude therefore, or continuity of fibres is observed, in the said Venæsection, admitting the *Hypothesis*, that the blood is distributed by the Arteries to all the parts of the body. And therefore bleeding in the left Arm is proper, either to evacuate the Spleen, or to make revulsion of the blood, when it runs too abundantly to the Spleen.

Bayle, Probl.
Med. 8.

II. Leeches applied to the end of the *Intestinum rectum* are reckoned to empty the Spleen of its feculent blood, the cause of obstructions, with great success; and it is believed there is no way more commodious for it. But Spleniticks have no reason to weigh Anchor upon a credulous Gale of this perplexed hope: Nothing can be communicated from the Spleen to the Seat by any Veins, Experience refutes it.

Rolincius.

III. He does not much amiss, who sometimes opens the black Veins upon the Spleen, because it has been known, that a long and contumacious Disease has been often cured thereby: But if ought dissuade you from bleeding in these Veins, you may set Leeches or Cupping-glasses with scarification to them.

Hollerius.

IV. Some of the most learned Physicians make an Issue or a Seton in the Region of the Spleen, and Vescicatories also, for the Diseases thereof, especially *Ætius* and *Aretæus*; yet I should not easily persuade the use of them for fear of an Inflammation of the part, which is oftentimes pained, and may endanger the Patient. ¶ But he speaks there of an obstruction of the Spleen: And if there be a *Scirrhus*, and that a contumacious one, *Capivaccius*, l. 3. c. 26. says, it is a most effectual remedy. ¶ *Saxonia, Pract. Præleß.* l. 2. c. 28. convinced by his own experience, maintains, that it is very good to burn in four or five places over the Spleen. ¶ And *Hippocrates*, l. de int. aff. 1. 35. is not against this remedy, who burns ten places, and those very large, upon a swelled Spleen, with *Fungi* dipt in hot Oil. ¶ *Forstius*, conf. 43. cent. 3. with *Ætius* and *Paulus*, commends

Silvaticus.

Sinapisms, as reviving the heat of the Part. But he adds, I know not for what reason *Aretæus* persuades himself, that he can mollify the hardness by fire. I should, with *Hippocrates* and *Ætius*, admit of burning; but all will be vain, if there be a *Cachexy*, and if black choler abound; for in such the Ulcers might easily turn cancrus.

V. *Hippocrates*, lib. de affect. n. 21. approves of Vomiting in diseases of the Spleen; and there he has respect to the antecedent cause contained in the Stomach; for the Splenitick abound with much crudities, which the Spleen draws, upon which it swells. When therefore the Stomach is emptied by Vomiting, Matter is substracted from the Spleen, a future occasion of obstructions. The Spleen itself will be eased by Vomiting, because the Gastrick Arteries discharge their filth into the *Coeliack*. And though the black humour be not very sequacious, because of its gravity; yet it may be drawn from the *Mefaricks*, and parts where it sticks pertinaciously, by the agitation and violence of the Vomiting, and may afterwards be voided downwards.

VI. *Hippocrates*, l. 4. acut. v. 396. excludes the Splenitick from Purgings. By the Splenitick in that place are meant, they that have a hard Spleen, and the Ancients, and *Galen* himself, 6 *Apoph.* 43. took it in the same sense. *Hippocrates* prohibits them purging, because the matter, which has been long settled in the part, will not give way to a Purge, and what is contained in the rest of the Body, being disturbed by the Medicine, runs to the part affected, and increases the Swelling. And certainly, to confess ingenuously, when I have been forced by the common custom, to give Purgings, even violent ones, in inveterate swellings of the Spleen, I know not one that was helped thereby: So that is no wonder, if those ancient Physicians, whose cures, *Galen*, *Ætius*, *Celsus*, and others, have celebrated, used in this case only Diureticks, and such things as extenuate and mollify the Spleen, and make no mention of purging, as you may see in *Galen* 9. de comp. med. *Ætius*, *P. Martianus* comm. in loc. *Celsus* and others.

VII. Why a Clyster rather purges the Spleen than the Liver, this seems the reason, Because it passes not beyond the *Colon*, but operates only on it and its vessels, as the *Mesentery* and *Hæmorrhoidal Branch*, which tends to the Spleen, and by which the humours are evacuated out of the Spleen.

Walaus.

VIII. We must know, that the Spleen will bear strong Medicines, as *Hippocrates*, lib. 2. *Morbis.* first Fortis. of all observed.

IX. Whether in Diseases of the Spleen must we evacuate by Urine? Many make a question of it, upon *Galen's* authority, 13. m. m. cap. 17. where he says, the Spleen must be purged by Stool, and not by Urine. It is clear from an Anatomical reason; for there comes a remarkable branch of the *vena porta* to the Spleen, by which the matter must be transmitted to the Liver, and thence to the *Cava*; and out of that to the Emulgents. And if some be cured by plentifull Urine, as *Bion*. 2. *Epidem.* 2. either *Hippocrates* takes notice of it as a thing very rare, and done by occult ways; Or indeed by using emollient and dissipating Medicines, and Purgatives, when much feculent matter remained in the Veins, whereby the humour might be fed, when it was discharged by Urine, it was rather a pretension than cure. Which the Physician may imitate, when he knows that the Urine is black, thick and feculent; for then he may safely use Diureticks, to evacuate the antecedent matter by that part. But it is apparent, that the Spleen does often discharge it self of lixivious saline drops, and of tartareous sandy crudities, while they are attenuated and voided by Urine. Thence the Physician takes an occasion to give Diureticks to those that are ill of the Spleen; and when *Hippocrates* lays down the Cure of the Splenitick, lib. de affect. he says, they must be purged by Urine. It

is false also, that there is no manifest way from the Spleen to the Kidneys and Bladder; for there are more Arteries, yea, five times as many as there are Veins, arising from the Coeliac: Whereby there is an easie passage to the Emulgents; but besides, the Lymphatick Vessels, tending to the Kidneys, are dispersed through it: Hence *Galen*, 2. ad *Glauc.* cap. 2. says, the Kidneys and Spleen are evacuated by Urine. It is false also, that Diureticks must be given, onely for Preservation, and the antecedent matter's sake; for it has been often observed, that Hypochondriacks, and the Splenitick, have voided very black Urine from the Spleen it self, and places about the Spleen, by the Emulent Arteries, with *evpoeia*, or good tolerance: *Valerius Exercit.* in cap. 40. *Hollerii*, says, he knew a Religious Man, whose Spleen swelled three or four times in the year, especially in the Autumn, he had a pain in his Hypochondria; he was black all over his body; at length, when he had made Urine as black as Ink for five or six days, he grew well. ¶ I observed this also in a Lawyer, one Mr. de Harfy, who was very Splenitick, and voided Urine by fits, very like Ink both in colour and consistence, which we cured by Diuretick Emulsions. And *Fortis*, cent. 3. consult. 48. approves of the same.

X. *Gaspar Hofmannus de usu Lienis*, cap. 16. writes, that nothing is better than Diaphoreticks in Diseases of the Spleen, according to *Hippocrates* and *Vallesius*. The Woman, whom *Hippocrates* first cured in Crano (6 *Epidem.* Sect. 3. v. 5. *Fæf.*) who was taken with a burning Fever, and had a hard Spleen, was critically cured by sweat; on the tenth day she sweat upwards, and on the fourteenth day downwards. *Vallesius* 3. in 2. *Epidem.* 20. iii. in 3. *Epidem.* agr. 3. ii. in 6. *Epidem.* 32. shews, that Sweats are frequent in Melancholick Spleniticks. For in them the Spleen discharges it self of the luxuriant saline dregs, and tartareous crudities, of which there is great store.

XI. Harts-tongue, or *Phyllitis Dioscoridis*, is of an Astringent, and as *Galen*, 8. *simpl.* speaks, of a bitter quality, for which *Galen*, as well as *Dioscorides*, commends it for Dysenteries. On the contrary, Spleenwort, according to *Galen*, 6. *simpl.* 61. is of subtiler parts. Who therefore, may some say, would commend Harts-tongue for Diseases of the Spleen, for removing of which, we see Harts-tongue Beer, used both by Physicians and the Vulgar, all the year long, than which, nothing is more valued? I answer, The Spleen is a part most fit to imbibe humours like a Sponge, inasmuch, that it often grows hard, by too much repletion, which requires strengthning. If therefore Universals have been premised, Aperients given, if Tamarisk, Capers, Gentian, *Aristolochia*, &c. have been used, nothing certainly can be given more seasonably to a Splenitick person, than Harts-tongue Beer. Not to open the obstructions of the Spleen; but when they are opened, to strengthen it, and defend it from new inconveniences and injuries.

XII. Idleness, according to *Celsus*, increases this Disease. And *Aëtius* saw some, that were cured of it onely by walking and running.

XIII. The place for application of Externals is the left hypochondrium. And they observe these places below, so that the fingers may be put into the empty spaces under the Bastard Ribs, or they reach forward, toward the middle of the Abdomen, and observe, by the touch, whether they be soft or hard. But in its natural site, though it swell out a little, it cannot be felt neither below nor before; for it has a higher situation. The Application about that place is in vain. But in a preternatural state, when it swells, either downwards, or forwards towards the middle of the Abdomen, Topicks are convenient in that place, and one cannot err in the place of application. A *Stillicidium*, Embrochation, or Fomentation with a Sponge, is convenient. A Bag filled with Spices, and boiled in Wine, penetrates

less. Liqueurs applied in a bladder are less effectual than a Bag; because the virtue is intercepted by the Membrane. Boiled Herbs themselves, though they be troublesome, are more effectual. Plasters, though they seem to stop the Pores, yet by their long lying on, they make up that inconvenience.

XIV. In an Inflammation of it, after a Vein is breathed, presently some repelling thing must be applied; but it must not be very cold nor astringent, lest the humour be condensed, or fixed more in the Spleen, and it be hardened, but some inciding thing must be mixt, as Vinegar.

XV. *Sennertus* advises to abstain wholly from Purgatives, except in the Declension: for though the Spleen will bear strong Medicines, yet then there must be no Inflammation, which would grow worse upon Purging.

XVI. The same method of cure must be followed in an Inflammation of the Spleen, as in the Inflammation of the Liver, if the following differences be observed. 1. That when the Spleen is inflamed, blood must be let in the left Arm, but not so often as in an Inflammation of the Liver. But what is received from Authours about opening the *Salvatella*, which they say peculiarly empties the Spleen, is superstitious, and now almost left off in practice. But it is best to open the Basilick Vein, to satisfy all Intentions. 2. As for Topicks, which in an Inflammation of the Liver are applied to the right Hypochondrium, they must here be applied to the left. 3. In the use of the said Topicks, we need not be so careful about, nor so long continue Astringents; for since the Spleen is no principal part, we need not be so studious about strengthning of it.

XVII. When the Fever, Thirst and Pains are asswaged, if there be any swelling or tension remaining in the Spleen, the Cure must not be left off, though the Patient imagine himself to be perfectly well, for it might easily turn to a *Scirrhus*.

XVIII. *Crocus Martis aperitivus* is good for opening obstructions of the Spleen, if it be made with the Acid of Sulphur, which is most effectual, if two or three grains of it be given with a Purgative Vehicle, to wit, with *Pilula de tribus*, or extract of *Senna*, drinking a deobstruent decoction upon it. But because by long practice I have observed it spoils the Stomach. I had rather give *Circulatum aperiens*, which Medicine contains in it *Sal Martis*, *Sal urine pueri*, and *Sal Tartari*, to which rectified Spirit of Tartar is put, and all of them circulated forty days continually in a Pelican, and so it becomes a most efficacious Aperient. The dose whereof is about half a drachm in distilled water of Fumitory and Agrimony, for fifteen or twenty days.

XIX. They who in Spleniticks begin with Aperients, and not with Astringents, are mistaken, because they set more by the preservatory Indication, than by the Vital, which by no means should be done in flaccid parts, such as the Spleen is. We use in them Chalybeates, Tamarisk, *Scolopendrium*, &c. which are all strengthners. When the Spleen is strengthned, it is rendred more able to expell the excrements. And the same Astringent virtue defends the Spleen from the flux of the humours. Therefore *Galen* 2. *Metb.* 16. says, that Astringents must be put in Medicines for the Spleen, because all Aperients, destitute of an Astringent faculty, puff up the Spleen; as sweet and sugared things do te-

XX. Issues in the left Leg, though they do not evacuate the gross humour; yet by voiding the ferocities, they preserve from Melancholick Diseases, and from trembling and palpitation of the Heart, as *Aëtius* and *Fernelius* have observed.

XXI. Antiquity formerly attributed a stinking Mouth, putrid Gums, bleeding, and sore Legs, to a great Spleen. But they distinguish badly between a Disease

Rosinectus.

Sennertus.

Riverius.

Fortis.

Idem.

Sanctorius.

Fortis.

Hofmannus.

Frid. Hofmannus.
m. m. l. i. c.
12.

S. Pauli.

Fortis.

a Disease of magnitude augmented, and an Ulcer, or a part vitiated with putrefaction: For the Spleen labours of both Diseases; but the signs mentioned by the Ancients do rather indicate putrefaction, than magnitude augmented: for when black choler putrefies about the Spleen, not onely the mouth is corrupted, but *Varices* also break out, and the Legs grow sore with Ulcers. A Child was ill kept by its Nurse, in stead of Milk she fed it with other gross food, it gathered from that much tough and viscid humour, so stuffing the narrow Veins of the Mesentery, *Pancreas* and Spleen, that this last part was much swelled, distended all the *Abdomen* and Loins, and made the whole body lean. But when the obstruction was removed, and some of the humour abated, the distended Spleen did so manifestly decrease, that it clearly appeared, this Swelling came not so much from a bad conformation, as from abundance of food, which being subtracted, the Child did thrive again, nor did ever any of those signs appear, which *Hippocrates 2. Prorrh.* ascribes to a great Spleen.

Tulpius.

XXII. The Spleen swells, not because of abundance of melancholy, but rather because of wind gathered and retained about these parts. Medicines therefore must be made of things astringent, and that discuss Wind: for Astringents hinder its inflation and swelling, and discuss, what is already received.

Rondeletius

XXIII. Cupping-glasses may be frequently applied to the Spleen, presently after emollient fomentations, which, as I have always observed them to doe good dry, for moving the matter, and heating the part, so I durst never use them with Scarification, lest the humour, when the moisture was exhausted, might turn Scirrhus.

Fortis.

XXIV. Whether may bloud be let in a Scirrhus of the Spleen? *Galen. lib. de car. p. f. m. c. 16.* commends Bleeding, and admires, why the Ancients omitted it in this disease. I think either may be done. For when the Scirrhus has injured the whole body, and there is a beginning of a Cachexy and Dropsie, venæsection, yea, and all manner of Bleeding must be omitted. When the rest of the parts of the Body are well, a vein must be opened in the left Arm, if strength be good, if not, in the left hand.

Saxonia.

XXV. After we have been carefull in purging, we must proceed to strong attenuants and aperients, in which some give the Broth of an old Cock with Steel, but because we have observed this to doe little or no good in Scirrhus tumours, we rather use a decoction of *Sassa-parilla*, which is held to be admirable against hard tumours; Take of *Sassa-parilla* well cut two ounces, the middle rind of a Willow 1 ounce, Bark of Caper-root half an ounce, Smith's water three pounds. Mix them. Make an Infusion for 24 hours, then let them boil half away; towards the latter end of the boiling add of Spleen-wort, Dead-nettle, each one pugil. Strain it for three doses to be taken in the morning after this Bolus; Take of Trochiscs of Capers one Scruple, *Crocus Martis aperitivus* three or four grains, Vinegar of Squills what is sufficient. Mix them. Make a Bolus. Continue taking thirty or forty days. Every fifth day this must be taken; Take of *Pilule de tribus*, Extract of Senna each half a drachm, Extract of Hellebore one Scruple.

Fortis.

XXVI. A Man about fifty years old had a great Swelling in the left Hypochondrium, unequal and hard, as big as ones Arm, reaching towards the right side, according to the usual site of the Colon. The Physicians ascribed it to the Spleen, together with other symptoms of the Hypochondriack disease. I prescribed the following Liniment and Plaster to be applied over all the upper region of the *Abdomen*, beside Pills made of Gums, by means whereof the Tumour was softened, and in a great measure removed. Take of Ointment of Marsh-

mallows compound, Oil of Capers, each 1 ounce, *Oleum Philosophorum* 2 drachms. Mix them. ¶ This is the description of the carminative Plaster; Take of Gum *Galbanum*, *Bdellium*, Ammoniack, each half an ounce, *Olibanum*, red Myrrhe, each 2 drachms, Thebaick Opium one drachm. Dissolve them in Vinegar of Squills, and when they are inspissated again, add of yellow Wax, *Colophonia*, each three drachms, Balsame of Peru, *Oleum Philosophorum* each one drachm, Earth half a drachm, Carroway distilled half a Scruple, Venice Turpentine what is sufficient. Make a Plaster according to Art. Spread it on Leather, and take measure of the swelling with a paper, and cut their Plaster accordingly, and apply it.

Sylvius de le Boë.

XXVII. It is an old tradition, that the Spleen may be cut out from Runners. But its noble uses disswade that, it being employed in deparating the acid bloud; and there is fear of an Hæmorrhagy, for it abounds in Veins and Arteries. Besides, it is so close tied by the membranes of the *Peritonæum*, and the communication of Vessels to the parts adjoining, that it seems impossible to take it out, without hazard of Inflammation, and endamaging the parts adjoining. Yet it were to be wished, the cause of so many evils could be extirpated. But in my opinion, we should doe little good, because the fault lies in the bad humours, which, when the Spleen were taken away, could doe the same mischief to another part. However, in a Scirrhus, cutting of it out would be of use, because the weight of it is troublesome, and often causes a Dropsie. *Fioravanti* tried it, who cut the Spleen out of a Woman's Belly, which weighed thirty two pounds, and so delivered the Woman from a Scirrhus, which would have killed her. Since *Fioravanti*, none durst venture on the operation in Man, though in Animals, whose Spleen is less and looser, it has succeeded well.

T. Bartholinus, cent. 4. hist. st.

XXVIII. *Petrus Affelinæus*, when he practised Physick at *Castel-franco*, observed, that the Country people there had a strange, irrational operation for a Scirrhus of the Spleen, whereby nevertheless the Patients acknowledged they found benefit; and, among the rest, a certain Knight of Malta, who, in his presence, suffered the operation to be performed in this manner; The Patient lay stretched out on a Table, a clean Paper was laid on his Spleen, and they set a very keen Ax to it, which they hit twice or thrice with all their force. The blow put him to much pain, but the Paper was untouched, and one might feel the Scirrhus cloven into two parts. And by this means those that have used it, think they hinder the increase of their Spleen. *Aquapendent* mentions this diverberation, who thinks it absurd, as also do *Cardan*, *Masfarius*, *Riolanus*, and others.

Vellscius.

XXIX. The site of the Spleen is sometimes changed, when, its ligaments being made lax, it hangs down, or when, they being broken, it hangs forward in the *hypogastrium*, which I saw four times. Then it deceives unwary Physicians in form of a Mole, or of a Scirrhus Womb in Women: In Man in form of a glandulous Tumour, like a *Steatoma* lying in the Mesentery. Sometimes one would think one of the Kidneys were slipt thither. But they are easily distinguished. A sign of the Kidney being slipt is a round Tumour; of the Spleen's falling an oblong Tumour, and a vacuity in the left Hypochondrium. But if the Tumour be moveable, as it is at the beginning, both the Spleen and Kidney is easily restored to its natural place again: Otherwise, after six months time, it sticks so fast to the *Peritonæum* forwards, to the bottom of the Bladder and the Guts; and, in Women, to the Womb, that it must of necessity putrefie there: Which it will doe the sooner, if you use emollient Medicines; you may prolong life, if you let bloud often, and keep up the Swelling with a Truss. Whether, if the Spleen be out of its natural place, or

Sip

slip forwards to the *Hypogastrium*, may it be burnt with a red-hot Iron? It is a very hazardous case, although old Veterinary Authours write, that so the Spleen may be wasted in Horses and Slaves, those cheap Souls, in whom they thought it good and lawfull to experiment this most cruel Remedy.

XXX. Take of Mandrake-root a quarter of a pound, cut it into pieces, and boil it in Oil of Linseed, *Sesamum*, or Almonds, adding a little Vinegar. Bruise them, and pass them through a Sieve; add to them of *Opoponax*, dissolved in Vinegar of Squills two ounces, *Stirax*, Myrrhe, *Bdellium*, Seeds of *Alkekengi*, each half an ounce, new Wax, or *Propolis* and Turpentine what is sufficient, Saffron two drachms, Celtick, Spike, *Schoenanth*, *Afarum*, or *Vitex*, each one drachm. Mix them. First foment the Spleen, and then anoint it. It has so emollient a virtue, that it will soften Ivory.

Medicines especially made use of by eminent Physicians.

For Obstructions.

1. Juice of Tamarisk drunk in Wine is highly commended. ¶ An Asses Spleen is good against inveterate obstructions. ¶ Germaner is a good Medicine also.

2. Tincture of Spleenwort cures all Diseases of the Spleen.

3. A Decoction of Fern is effectual in this case.

4. Gum Ammoniac dissolved in Vinegar does especially dissolve the Spleen.

5. Deadnettle taken any way is good for a hard and obstructed Spleen.

6. Root of Dwarf-Elder boiled in water till two parts in three be boiled away, cures admirably, as I have experienced.

For a Scirrhus and Hardness.

1. For a hardened and obstructed Spleen I had always success according to my desire, by giving a decoction of Roman Wormwood to drink in the Morning; and it succeeded always better, if Smith's Water were given after Meat.

2. Powder of an Asses Spleen, or a Wolf's Liver, and the Ashes of a Bat given to two drachms in Wine, or in *Oxymel*, or Vinegar of Squills, is very efficacious. ¶ But the most effectual remedy is drink prepared with Steel and other things.

3. *Spiritus Vitrioli Tartarificatus* is admirable good; ¶ Also a Plaster of Juice of Hemlock, and of Juice of Mandrake is good, if they be mixt with Gum Ammoniac.

4. Juice of Crow-Garlick dried and powdered is admirable good; Take of this one scruple, Gum Ammoniac dissolved in Vinegar of Squills half a drachm. Make a *Bolas*: give it four hours before Meal, and drink half an ounce of *Oxymel* presently after it. ¶ Among compound Medicines, this is an effectual one; Take of Heath-Berries half an ounce, White Pepper, Syrian Nard, Gum Ammoniac, *Thymiana*, each two drachms. Powder the dry things. Dissolve the Gum Ammoniac in Vinegar of Squills. Mix them. Make Trochiscs of a drachm weight, Give one of them with *Oxymel*.

Lienteria, or, A Lientery.

The Contents.

What such the Preparatives ought to be? I.

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If it proceed from a Dropsie, it must not be stoppt. V.

Medicines.

I. There is a great difficulty about things that prepare the thick matter: For on one hand Writers propound *Malsa*, Honey of Roses, and *Oxymel*; but every one of these things incides and loosens the Belly, and so they are all suspected. Such things therefore must be chosen as both incide and heat, dry and astringe: These things are commended among the rest, Vinegar of Squills, Syrup of Mint; and of Wormwood. But above all the rest, *Sal Theriacale* is commended, or Salts made and extracted from hot Stomachick Powders, as Salt of Wormwood, Mint and Spike; And if they are not to be had, it is easie to make *Lixivia* of their Ashes, and how available *Lixivia* are in absterfion and drying, *Galen*. 2. de antidot. c. 7. shews. A *Lixivium* may be made of Stomachick Ashes, by burning Wormwood, Mint, Coriander, Spike, *Schoenanth*, Pennyroyal and Calamint. One ounce may be given either simple or mixt, with Vinegar of Squills, or Syrup of Mint, or the like. After Absterfion, the Stomach must be heated, adding Astringents, among which one drachm of Coriander powdered, with Odoriferous Wine, is very good. Opiates also may be given; as *Philonium* about half a drachm: for when sleep is procured, the Meat is kept, and so it is concocted.

II. The Matter, which is contained in the Guts, must be evacuated by Stool: And what is contained in the Stomach, by Vomit.

III. If the Flux arise from some fault in the food, or from the violence of a Purge, Astringents must be avoided, lest the Humours being repelled from without, return inwards: for it will stop by changing the diet, and by taking off the Acrimony of the Medicine.

IV. Milk seems hurtfull, because it loosens the Belly, which is already loose. 2. Because of its cooling virtue, which is suspected, where the concoctive faculty is weak. But we must observe, that Milk is good for that sort of Lientery, which thin and sharp humours do cause, by irritating the expulsive faculty, they being tempered by taking it; or when the inner coat of the Stomach is excoriated in its superficies, for which reason the Meat creates trouble and mordication, so that it cannot be retained, in which case the taking of Milk is most convenient. 1. Because we must take care to give food, which is easie of alteration, because the Meat cannot stay long in the Stomach and Guts, for the weakness of the retentive faculty; But Milk is such, and, as *Galen* 6. de plac. testifies, it may be converted without Alteration. 2. Because in regard of its caseous substance; which abounds in it, it is a little stopping. Observe, 2. Milk must not be given raw, but boiled, that the serous part flying away in boiling (which by its nitrous, deterfivive faculty, does harm) onely the caseous may remain, which is the fitter for Nutrition.

V. If the Flux arise from the Dropsie, it must not be stoppt, lest perhaps Nature, trying to disburthen her self that way, should be forced to some principal part. It is better to strengthen the Stomach, and to refresh it with good Diet.

Medicines especially made use of by eminent Physicians.

1. The Seed of a Head of Popy bruised and given is very good. ¶ Also sowre and unripe Mulberries, dried and powdered, and given in drink, gives great relief.
2. A Hen's Gizzard dried, and powdered, and given in drink, is admirable good. ¶ One, after he had tried several things, was cured with this Eleſtuary; Take of Sugar of Roses 6 ounces, the best Treacle 6 drachms, with Marmelade of Quinces, make an Eleſtuary. ¶ I cured one of a desperate Lientery with this; Take the Yelk of an Egg, ſrew the Powder of one Nutmeg on it, roſt it upon a Tile. It cured the Flux, and the party recovered.
3. Diſtilled Oil of Mint, with Quince-wine, and Cinnamon water, ſtops this Diſeaſe.
4. If the Diſeaſe continue long, Rhenbarb, eſpecially prepared with Roſe-water, is of great efficacy.

Altomari.

Foreſtus.

Grembs.

Sennertus.

Linguae Affectus, or, Diseases of the Tongue.

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The Cure of the Ranula by a red-hot Iron. V.
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Medicines.

J. Lange-
lotus in
Miſc. cur.
ann. 75. obſ.
9.

Bartholinus.

Mindererus.

I. A Nobleman tried the ſingular effect of Leeches in a moſt contumacious ſwelling of the Tongue. One half of the Tongue was hard, from a deſluxion of black choler, ſo that it ſtuck immoveable in the mouth, like a piece of a dry ſtick. The beſt Medicines were uſed for it, but unſucceſſfully, for three weeks. But the thick and viſcous humour was drawn out by Leeches onely applied to the Tongue, which the Phyſicians had diſſwaded, and the Patient recovered.

II. A Maid at Liege had a large thick Tongue, as big as ones hand, ſo that ſhe could ſcarce contain it in her Mouth. The Phyſicians cured her, by cutting off what was ſuperfluous at the end, till they had reduced it to the uſual bigneſs. This I had from the judicious Johannes Walæus.

III. In the heat of the Tongue a Gargarism is not ſufficient, but ſomething that is far is requiſite: for, though it be never ſo well waſhed, it preſently grows dry.

IV. The Wounds of the Tongue, that are made tranſverſe, are uſually reckoned incurable, becauſe of its mobility, moiſture and great laxity; yet I would adviſe (unleſs it be quite cut off) to try to cure it; for ſuch wounds are not wholly incurable. I had a Girl three years old under cure, which falling to the ground with her Tongue out, cut off almoſt all that part of it which was between her teeth, and had quite cut it off, but that ſhe wanted two of her teeth. When I was called, I thought to have ſowed the parts together, but the Girls impatience would not permit me. Therefore I managed the cure with the things following; Take of Leaves and Flowers of Privet, Plan-

tain, red Roſes, each one handfull, Rinds of Pomegranate and its Flowers each half an ounce; boil them in two pounds of Chalybeate water, to the conſumption of a third part. Add to the colature of Acacia two drachms, Syrup of dried Roſes two ounces. Make a Gargarism: ſhe often held in her mouth Syrup of dried Roſes, Quinces, Currants, and rob of Quinces, ſhe uſed liquid Meats: by theſe things ſhe was cured, without any impediment to her Speech.

Hildanus.

V. The Ranula (or Swelling under the Tongue) put a young Man to ſo much trouble, that he could ſcarce ſpeak, nor could he well ſwallow or take Breath. The Chirurgeon determined to get out the Phlegm gathered there with a Penknife; but it was grown ſo hard, it would not run: And therefore he changed his mind, and conſumed it with a red-hot Iron, hindring it withall from returning. But if the matter of the Ranula be ſoft and ſequacious (which is eaſily diſcerned by the touch) let burning alone, and cut onely the top of the Skin, and the limpid viſcid matter, like the White of an Egg, will either run out of it ſelf, or may be ſqueezed out with the finger. ¶ In a Boy Veſtingius cured it with an Aſtringent drying powder, of Cuttleſh bones, Spodium, Coral, Tartar, Pomegranate Flowers and Roſes. ¶ P. Marchetti cut out the Tumour, and took out the Bladder whole, with admirable ſucceſs, applying Juice of Celandine.

Velfchius.

VI. The Wife of N. was ſubject to Catarrhs, which fell chiefly on the Jaws: Sometimes the matter falling under the Tongue, did ſo fill and dilate the place, that a true Ranula appeared: And becauſe there was bloud alſo (for the pain, pulſe and colour, did ſhew that) I reſolved to promote ſuppuration, which happened within ſeven days, upon which ſhe could ſpeak and breathe better. But firſt of all the Pus ran fetid, and then pure. I ſaw two other Ranula opened with a Knife, out of which matter came like the White of an Egg; whence alſo it appeared, that they derive their original rather from a cold than a hot matter. Then we diſputed, whether Ranula uſe to grow again? But this is confirmed by experience. I thought it therefore ſafeſt to cure by ſuppuraters, becauſe that way the Bladder is taken away alſo.

Salmuth,
cent. 1. obſ.
36.

VII. If the Ranula, or Tumour ariſing under the Tongue cannot be cured by diſcutients, which rarely falls out; we muſt proceed to opening, which muſt not be ſmall. Becauſe the matter contained in the Bladder will gather again, and fill the Bladder (there being alſo a great laxity and ſoftneſs of the part, whereby it is fit for reception) but Section muſt be made along the top of the Tumour in each Eminence, that all the matter may run out at once. ¶ A young Woman, after an Epidemick Fever, had a ſwelling under her Tongue, as big as a Pigeon's Egg, round, hard and red, ſo that with much pain the Tongue was driven back, and her ſpeech and ſwallowing hindered. The Chirurgeon wiſely avoided opening of it, becauſe the abſceſs was not as yet ripe, and if it be opened all red, it may indanger either an Inflammation or a Cancer. In the mean time the body was prepared in a due method. When ſix weeks were paſt, I ſaw the Ranula pale, and with my fingers on each ſide, I found it was ſuppurated, and that the matter fluctuated in a thick coat, wherefore I adviſed opening of it. The Skin was broke with a gentle incision of a Penknife, where it was obſerved to be free from Veins; preſently as much matter, like the White of an Egg, came out, as a large Spoon would hold. The Ranula fell; in a few days after, a new incision was made on the other ſide, and there came out the like quantity of the ſame Liquour, and ſo ſhe recovered her Tongue and Speech; and ſhe ſwallowed as formerly.

Riverius.

Bartholinus,
cent. 1. liſt.
89.

VIII. A Minister of God's Word could not Preach any more, for the Laxity, or half-Palfie of his Tongue: Several things were tried in vain. At length this Mixture did the business; Take of Mithridate one drachm, Extract of *Acorus* one scruple, Powder of Root of *Aron* 2 Scruples, Effence of Castor six grains, Oil of Cloves four drops. Mix them. He had this mixture always in readiness; and if he hæstated in Preaching, he betook himself presently to his Mixture, and finished his Discourse. At length he died Apoplectick.

IX. By accident many things were found of old, and do also come to light at this day. It happened that one, who had a great piece of his Tongue cut off, on a time drank out of a Wooden Dish with the Reapers in the field, and when he was tickled by some that stood by him, he suddenly broke out into articulate voices, who admiring the novelty, put the same dish to his head again, in the same posture as before, and spoke so as he could be understood of all. He carried it about him for a while after, and used it for an Interpreter of his mind, till he got another Wooden Instrument ingeniously made him, which he wore about his neck always, and expressed his mind by it. See the Figure of the Instrument in *Paræus*, l. 22. c. 5.

Medicines especially made use of by eminent Physicians.

Benedictus. 1. The White of an Egg with Mucilage of *Pssyllium*, and Syrup of Roses or Violets, boiled a little with Seed of Purlane and Ivory are very good for a hot and dry tongue.

Wittichius. 2. Take Oil Olive 1 Spoonfull, Vitriol the quantity of a Hazle-Nut. Mix them. Anoint the Tongue, it cools exceedingly, and preserves from putrefaction.

Rhodus. 3. In the swelling of the Tongue *Galen's* remedy is excellent; Hold Juice of Lettuce in the mouth. It has been often tried.

Grulingius. 4. Spirit of Black Cherries restores the lost Speech, to a Miracle.

Lues Venerea, or, The Pox, or, Venereal Disease.

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I. THE Pox, unless it plainly shew it self

by tubercles and pustules, which use to break out here and there all over the body, but especially about the forehead and the obscene parts and thighs, and most about the knees, is often occult, and does easily impose, and makes the Cure bad, if it be new; and difficult, if it be inveterate. An accurate judgment therefore is needfull. And all depends upon the Confession of the Patient himself. The Physician therefore must sift the Patient. For, besides those manifest degrees, which *Fernelius* makes to be four, there are others also, which are difficult to be known, because of the Symptoms common to other Diseases. But the lying with a Whore may serve to signifie all; and if the Patient confesses this, be the Symptoms never so common, yet he may very well be cured as an infected person.

II. Stoves are not onely used in the Cure of the Pox, to promote it, but even before the Cure be undertaken, if, because the signs are not so plain, we doubt of it. And we may know it is the Pox, and be the more assured of it, if after sweating several times in a Stove the latent seminary of

Platerus. it be drawn to the skin, and then shew it self in spots, pustules and other symptoms.

III. It is my advice to bleed often, and in divers parts of the body, and in those chiefly which are most tormented; because the seminary of this Disease resides principally in the blood in the veins, which disperse themselves far from the Liver, and in them chiefly that are next the parts infected. And you must either let blood in them, (if possible) or in parts next to them. Hear you, when the Disease has fixt it self in the body, you may not here, as many rashly doe, make revulsion of the peccant humour to contrary parts, like as in Inflammations, which are onely raised by abundance of blood: for in these, though you retract what is next to the part affected, it cannot infect the rest, because it is not yet putrefied: But in the Pox it is far otherwise, and in all other Diseases which a pernicious juice causes or foment.

Botallus. IV. Some, not confiding in specifick Alexipharmacks alone, will have common ones added. *Fernelius* gives half a drachm or a drachm of his Electuary, or alexipharmack Antidote, before the Patient drink the first draught of his Decoction: *Palmarius*, in imitation of him, has contrived two Antidotes: And *Rondeletius* commends his Treacle-water. *Ant. Minodaus* thinks Treacle is the best Alexiterick against the Pox. But, as I do not dissuade the use of these things, because it is the custome, when Poison is taken, and it is not known what it is, to give Treacle and other common Antidotes; So I would not persuade any Man, to rely onely on these Medicines, and neglect the proper ones. And indeed I observe few Physicians doe it, because Experience has convinced them; that this Disease cannot perfectly be cured without *Guaiacum* and such things. Nor does it therefore follow, because some that have been ill of an incurable Pox, could not be cured by *Guaiacum*, that more confidence may be put in those other Medicines: For they that could not be cured with these proper Alexipharmacks, would much less have been cured with common ones.

Sennertus. V. They that had the Pox, were formerly so tormented, that the Remedy was worse than the Disease: But now they may easily be cured by the following Remedy, with Sweat and Salivation, though they neither be confined to their Bed nor to their Chamber. The way is this; Take of Antimony and *Sarsa Parilla*, each six ounces; let the Antimony be tied in a rag, and put into six gallons of water, with the *Sarsa* and 40 Nut-shells and husks. Boil them to a third. Let the Patient take the Decoction thrice a day, morning, noon and night, a draught of it a good distance from meals. The Antimony will serve four times.

Borellus, cent. 2. obs. 96. VI. Though there be several Alexipharmacks for the Pox, yet some are more efficacious than others, and one has one quality, another another, where-with we may satisfie sometimes one intention, sometimes another: And therefore seldom one of these alone, but often several of them are used. Indeed, if the Disease be simple, and none of the *Viscera* be out of order, and if there be any notable intemperature in any part, which may hinder the use of *Guaiacum*, it is the best of all, as it resists both by occult and manifest qualities. But if any other Disease be joined with it, it is often good to add *Sarsa* and *China*. Concerning Alteratives, which use to be added, we must have a care, lest by adding *Cichory*, *Endive* and cooling things (which are added to abate the heat of the *Guaiacum*, which yet need not so much be feared) Sweat, which is the main thing requisite, and which does more good, than a little Heating does harm. Therefore, laying these aside, to say something of mixing Alexipharmacks, if the constitution of the Patient be very hot and dry; if the humours fall impetuously from the Head upon the Lungs or Breast, or other parts, *Guaiacum* cannot conveniently be given

alone, because it heats and dries the parts more, and by its heat does melt the humours and put them in motion: But then *Sarsa* is safer, and *China* is yet more convenient, which both tempers the heat, and has an astringent virtue, whereby it stops fluxions. On the contrary, if strength be low, and the Eyes weak, *Sarsa* is not proper, because it loosens the Stomach, and makes the Sight dim. If there be a great Atrophy (so it have not its rise from the Pox, for then this, as being its Cause, being removed, the Leanness also ceases, and the Body begins to thrive better) *Guaiacum* and *Sarsa* are not safe: But then *China* is far more beneficial, as being a thing that substantially moistens. Some commend *Sarsa* above all other things for a Consumption. Some have ventured to write of *Guaiacum*, that a Decoction of it nourishes as much as Chicken-broth; but they exceed; for though it may impart some alimental Juice to the Decoction, yet no Man in his Wits will deny that there is more nutriment in a Chicken. If any upon taking it have grown more corpulent, it must be by accident, by taking off the violence of the Pox, which hindered nutrition. So if grievous Pains infect the Patient, or if there be gummatous Tumours or great Ulcers, *Sarsa* is proper. Thus, according to the constitution of the Patient, and the nature of the conjunct Diseases, sometimes we must use one Alexipharmack, sometimes another; and sometimes it is good to put them all in, in a greater or smaller quantity.

Sennertus. VII. We must not try Evacuation by the Skin, before the Body be discharged of the excrements, lest there should be an attraction of more than can be evacuated by the Skin. Which if it be done, the Disease will either not be cured, or come again quickly, or grow worse. I have known several, who after Inunction and Diet-drinks have had either Pains or *Exostoses*, because the matter was attenuated, melted, and drawn to the out parts, but not evacuated. Wherefore I reckon these bodies must be much or frequently evacuated in the beginning. But if we may not evacuate so much, certainly a Purge must be given after three times Anointing, that what is dissolved, may be evacuated.

Rondeletius. VIII. Some reckon that *Guaiacum* best, which is white, because the younger it is, the whiter it is; the elder it is, the blacker it is; and the elder, the drier; but what is not so old, is moister and abounds more with Juice. But since there is a twofold moisture in living Creatures, one primigenial, the subject of the innate heat or spirit, and apt to take flame; another alimentary, watry, and not so apt to take flame, the Virtues of this Wood are not to be estimated from the alimentary and watry moisture, but from the innate heat and primigenial moisture. Which, in the first age both in Infants and in Plants, since it is drowned in much moisture, many actions are weak in the first age, which afterwards, when that moisture is a little wasted, and the heat made more lively, do in the progress of their age grow stronger; and this Heat, the principal Instrument of all actions, uses to continue in full force, till the flower of their age and their *anum*. Therefore though in *Guaiacum* the innate heat and radical moisture be always the same, upon which its Virtues do depend; yet because in the young Wood the virtue is drowned as it were and checked with the abundance of moisture, the young Wood is not so effectual as that which is well grown and of a confirmed age. And therefore for the Cure of this Disease you must not chuse the Wood that is yellowish or of a Box colour, and is either not ripe, or is cut from the boughs, and not so efficacious; but the black must rather be chosen, as being the most resinous, and abounding in that fat and balsamick faculty, in which the virtue which is adverse to the venereal Virulence does most reside. It is good therefore to distinguish the age of this Wood, that

that the most effectual way be taken. For that which is black within, but is cloven lengthways, as with Lines of a brown colour running round, is effectual indeed; but it is either cut from boughs of the Trees, or it is not come to full maturity; and therefore not so efficacious. For the reason, why such Lines appear, is, because the fat substance, that resides most in the middle of the Trunk of the tree, does not yet so abound as to fill all the inner parts of the Wood. But that which is all black in the inside, and white only in the *superficies*, if it be found, ponderous and odoriferous, and if it vellicate the Tongue with a small acrimony, and be intermixed with no Lines, or with such as are full of Resin: Therefore when it burns, beside the gratefull scent it has, it gives also a black Resin; This, at its full maturity, is cut from the Trunk of the tree, and therefore is very effectual: But if it be full of Lines and Holes, and be good neither in smell, weight, nor acrimony, nor when it is burnt, sweats a Resin, it is a sign that it is old, and its Virtues are grown dull.

Sennertus.

IX. L. *Septalius*, lib. 7. *Animadu. numero 204.* reprehends them that deny, a Decoction of the Wood may be made in Wine alone, because nothing is fitter to extract the virtues of Medicines, than Wine it self and its Spirit. And therefore he makes a Decoction with Wine, which he uses in an inveterate Pox; with an ill habit and cold matter predominant. But admit Wine be very proper to extract the virtues of Vegetables; yet this cannot be denied, that the strength of the Wine wasts in boiling, and when the Spirit is exhaled a nauseous Phlegm, not so good as simple water it self, is left. I am of opinion therefore that the Wood should be boiled in Water, and towards the latter end of the decoction the Wine must be added: Or, the Wood at least must be infused a long time in the Wine, or it must be boiled in a double vessel, that nothing waste; but by no means to a consumption of the third part.

Idem.

X. There is a different proportion of the Wood to the Water observed, according to the age, constitution of body, and time of the year: And there are taken to twelve pounds of Water from three to twelve ounces of Wood. For if the season of the year and the body be hot, it is the safest to take a less quantity of Wood, and to be the longer in performing the Cure with safety, rather than to doe injury with a strong Medicine, especially the first days of the Cure, and before the superfluous humours be abated, and the Sweat begin to come with ease, and the Patient be used to the Decoction. And *Eustachius Rhodius*, lib. de *Morbis occultis*, cap. 13. writes, that he has seen Patients, who through this error, to wit, giving too great a quantity of the Wood the first days, have fallen into a Fever, that afterwards they have been forced to abstain from the Decoction, to their great damage.

Idem.

XI. *Fallopins*, lib. de *Lue*, cap. 46. reprehends them that reckon a Decoction made in *Balneo Mariae* is too dilute and weak. And that a Decoction in *Balneo* is better than that which is made in an open fire, he endeavours to prove by instancing in distilled Waters, which are made very good in *Balneo*; seeing there is no aduision in such; but the greater eliquation, which is made in heat and moisture, makes the decoction more excellent. But Experience teaches a quite contrary thing to what Reason proves: For though the best Waters may be made in *Balneo* of some moist Plants, as Roses, Violets, Lily Conval, and the like, when they are fresh (whose virtue consists in a volatile Salt) without putting any Water to them; yet in hotter Plants, especially Roots and Woods, whose virtue consists in the oily part, their virtue can never be got out by the too gentle heat of a *balneum*. The case is the same in many Seeds; But it is necessary to distill by a Copper,

by which, with the vehicle of the waters, the more fixt parts are elevated. Since therefore all the virtue of *Guaiacum* consists in that oily and resinous part, and since strong boiling is required to get it out, the gentle heat of a *balneum* cannot doe it, but boiling in an open fire is requisite, which nevertheless, if there be a convenient quantity of water put to it, causes no aduision.

Idem.

XII. A. *Minodaus*, lib. de *Lue*, c. 4. judges the Decoction must be sweetned especially with Honey; for he thinks that a small quantity of Honey, if it be boiled with it and scummed, does take away the bitterness; and that the Decoction acquires a greater virtue in absterging, attenuating, opening and melting the humours and strenghtning the parts. Which as we allow to have place in phlegmatick bodies: So, since Honey easily turns to choler in cholerick bodies, we reckon it cannot safely be used in hot and dry ones; but we reckon Raisins, Liquorice or Sugar may more conveniently and safely be added, for the taste's sake, and that the bitterness and acrimony may be taken off, we may put them in towards the latter end of the Decoction.

Idem.

XIII. Some for such as have a hot and dry Liver, do, towards the latter end of the Decoction, add a root or two, or a handfull or two of Cichory, Endive or Sow-thistle. But since such Decoctions must be continued a long time, we must have a care lest by addition of such things they be rendred ingratefull and loathsome to the Patient. Again, seeing enough Decoction is made at one time, to serve for several days, and because the putting in of such Herbs makes it worse to keep, to prevent this, we must not put these Herbs to all the Decoction, but onely to about one pound at a time.

Idem.

XIV. The Extract of the Wood in *Saxonia's* judgment, is not strong enough to cure an old and strong Disease; but the Decoction is deservedly preferred before it. However, if any one have a mind to use it, it is necessary to take some liquor after it, by which vehicle the Extract may be distributed all over the body.

Idem.

XV. Chymists fearing lest by a long Decoction, which is made to half or to a third part, the spirituous and subtil parts should exhale and be dissipated, and so the virtue of the Medicine should be diminished, they put some dust of *Guaiacum* in a retort, they pour to it a sufficient quantity of Water, and set the retort in ashes, they fit a receiver, then they put fire under it, first digest it, and then they distill it, to a consumption of half of the Water. Four ounces of the distilled Water are given. But it is the best way, to put the distilled Water again to the rest of the Decoction in the retort: For so all the virtue may be got out. Upon the Decoction remaining in the retort, new Water may be poured, and digested for twelve hours, and afterwards may be distilled; and the distilled liquor may be given instead of drink. And because sometimes it happens, that Children are born with the Pox, or infected by the Nurses, this Distillation, sweetned with Sugar, may be given them for a Julep.

Idem.

XVI. If any Herbs have been added to the first Decoction, the secondary Decoction must not be made of its Remainers, because it would be loathsome; but it must be made more dilute and fresh. Some also towards the latter end of the Decoction add a fifth part Wine; And *Fallopins* thinks this should not be done onely when the Patient goes abroad, or his Stomach is weak, especially if the Decoction be made of *Sassa*. But though some make a second Decoction of *China*, yet *Palmarius* thinks it gives its virtue at the first Decoction; yea, some give the first Decoction at Dinner and Supper; because it is not ingratefull to the Palate.

Idem.

XVII. Some utterly reject Purgatives in the Decoctions, and maintain that they should neither be put in a Decoction, nor used separately from it; because Peoples Bodies use to be well purged, before

fore

fore they come to the taking of the Decoction. 2. Because Purgatives and Sudorifics cause contrary motions. Others would have them mixt, that the Belly may be conveniently kept loose, and the Blood be cleansed. Others will not have them mixt, but will have a Purge to be given once in eight or ten days, which is best. For although the body be purged before the taking these things, yet something may easily remain, and now and then be gathered anew. And Sweat onely carries off the thinner matter, but leaves the thick. Nor this way are contrary motions made, for that day a Purge is taken, no Sudorifick is given.

Sennertus.

XVIII. Though all we Practitioners use the Quaternion of exotick Medicines (*China*, *Sarsa parilla*, *Guaiacum* and *Sassafras*) yet there are not wanting with us both Roots, Woods and Barks, which are able to perform the same as powerfully, easily, safely and pleasantly as these Exoticks, which are now and then deprived partly of their virtues and exotele. And our Country Drugs are such as these; Roots of Prickly Bindweed; Roots of Butter-bur, Bark and Wood of Juniper together with its Berries, Oak-wood, and several such things. Certainly Exoticks are not to be despised, nor home-bred things to be neglected: because, as they are bred in our Soil, so they have the greater affinity with our bodies; and are observed to operate more kindly, yea, and more effectually upon the same, than Exoticks.

Sylvius de le Boë.

XIX. The best way of taking aromatick Decoctions, and other Medicines, that temper the acid Spirit, is to take them often in a day, and in a small quantity, that they may introduce a gradual, and therefore a more laudable change and amendment into the blood: For every sudden alteration, especially if it be great, is dangerous. Nay, we may, and with advantage, mix the same Alteratives with their Food, and give the said Decoctions both at Dinner and Supper, instead of other Drink, to the end, that being mixt with the Food, they may together with the Chyle, which they make much better, be more easily, kindly and profitably mixt with the Blood, and amend it insensibly: As I have often found it, to the Patient's great benefit, when I have done this in the Pox, and in other Diseases.

Idem.

XX. That we may sweat with more success, we must take notice that the same Decoctions, which were given before onely for the alteration of the humours, if Sweat must be procured, must either be given in a larger quantity, or they must be made stronger. Let them be taken therefore in a double or treble quantity; and either at once, or at several times, but at short intervals, i. e. within half an hour. For so, when not onely the strength of the Sudorifics is increased, but the liquor it self also is augmented, the eruption of Sweat will be promoted. But if it be irksome to the Patient to take a great quantity and often, the same Decoction may be made stronger; which may be done, if less liquor be put to it, and if it be boiled a little longer. For by long boiling more virtue is got out of Plants, and especially out of solid Woods, which give their virtues but slowly. It is known moreover, that a Decoction of any thing is made thin and weak with much water, but thick and strong with a little water.

It conduces also much towards promoting of Sweat, if the Decoction be given hot: For all sorts of Medicines penetrate far sooner and more powerfully hot than cold or but warm. Besides, the Heat of a hot Decoction dissolves the viscid Phlegm in the body, and tempers the acid Humours, which must in this Disease be conquered and expelled.

But it is good, that besides the body be disposed to bear Sweating the better, either by composing the body in bed, and covering it with clothes, or by going into a Stove; or by running, or any other violent motion of the body: For as these alone use to cause Sweat; so they cannot chuse but pro-

mote it; yea, when it comes slowly, it is good to take hot broth.

Idem.

XXI. These sudorifick Decoctions work also in many by Urine, especially when Diureticks are taken with them. Diureticks are more conveniently taken with them, if those they call the Opening Roots, or other parts of Diuretick Plants, Berries, Seeds, &c. be boiled with the Sudorifics. For then Sweat and Urine may be promoted at once. And I think no man need fear, that the operation of the one Medicine will hinder the other, since most reckon either Medicine will answer both Indications: For Sudorifics do in some measure provoke Urine, and Diureticks also promote Sweat. Therefore I have no reason to scruple Diureticks in the Cure of the Pox, since there is no difficulty in the case. The Physician ought carefully to observe, whether the Patient, upon taking diuretick or sudorifick Decoctions, incline more to Sweat or Urine, to the end, that evacuation may be most promoted, which is the easiest to the Patient, and from which most benefit may be expected. Wherever therefore we observe a Patient sweats with difficulty, but does void abundance of thick Urine, with a full and laudable Sediment, it is not good to force such an one to sweat, but to expect the chief Cure, from expulsion of Urine onely. And it would not be amiss in such a case to increase the quantity of Diureticks in the Decoction, or for the Patient now and then to take a Decoction of Diureticks alone. For the pituitous humour, when it is conveniently severed from the rest of the blood, either in the Kidneys, or in the Heart, the effluence in its right ventricle being amended, is successfully discharged with the Urine, and passes more easily that way than by Sweat.

Idem.

XXII. Concerning the Decoction of *Sarsa parilla* we must take notice, that they who care not to spare cost, and could have the Decoction efficacious, do onely take the Bark, as being the most efficacious part of the Root, and throw away the inner Pith, as less effectual; yea, some reckon it is cold and a little astringent.

Sennertus.

XXIII. When *China* Root first came to be known, many preferred it before *Guaiacum*: but Experience afterwards abated its fame; And *Palmarius* writes, c. 14. that many to their great prejudice preferred this Root before *Guaiacum*, and that he found by Experience, that with a very spare Diet it was ineffectual for the Pox. And oftentimes the Stomach grows so moist, and the innate Heat is so oppress'd with the Decoction of it, that a grievous Lientery, and a great Crudity often follows, in whom the innate Heat was but weakly. He writes moreover, that it causes the Spleen to swell and grow hard in them that use it long. And he will not also allow it any extraordinary occult quality against the Pox: Because after taking of it, they frequently relapse, who have thought themselves well cured. And *Fallopianus* confirms it, who writes, that he had used this Root three or four times for the Cure of this Disease, and could do no good with it. And if perhaps some one, who could neither be cured by a Decoction of *Guaiacum*, nor by anointing with Quick-silver, recovered his health by a Decoction of *China*, *Palmarius* thinks this to have been the reason, That Nature delights in variety of Medicines, and being tired out with strong things, was at last relieved by weaker.

Idem.

XXIV. Some advise, not to make more of the Decoction at once than can be taken in one day, because when it is cold it easily grows sowre: And therefore they order it to be kept on hot Embers, But Experience has shewn us, that it will last four days. Yet, whenas it grows sowre, that very thing argues, the root has something spirituous and alimentarious in it, which is the cause of fermentation, and thereby of the Sowreness.

Idem.

XXV.

XXV. Besides Sudorificks and Diureticks, Purgatives also must be used in the kindly Cure of the Pox, which must be Phlegmagogues; and here Experience does not a little confirm my opinion, as well as the consent of all Practitioners, which among the common things gives the preeminence to Pulp of *Coloquintida*, and among Chymical things to Mercurial Medicines. Now these things are intended chiefly to evacuate a pituitous viscid humour. Therefore we did not conclude much amiss, that the Venereal Poison was mixt with viscid Phlegm, and that Phlegm did both produce and increase it, and is now conveniently evacuated with it; but it must first be a little corrected.

Sylvius de
le Boë.

XXVI. *Coloquintida*, I say, and most Medicines made of Mercury are very proper both for a pituitous viscid humour, and for curing the Pox, as all experienced and learned Physicians agree. To such as like common Medicines best, I recommend the taking of Pulp of *Coloquintida*, boiled in part of the Sudorifick Decoction, or in some other Apozeme, twice or thrice a week, to carry off by stool the gross and viscid humours which are not fit to be expelled by Sweat through the Pores of the Body. For besides, that pituitous humours blended with the mass of Blood, are very difficultly thrown off by Sweat through the Pores of the Body, moreover much Phlegm is discharged with the Spittle and the Pancreatick juice to the Guts: wherefore it is better to carry it off once or twice a week by stool, than by the continual taking of Sudorificks onely to carry it back to the Blood, and so to render the Cure both more tedious and difficult.

Idem.

XXVII. They that have no mind to take a Decoction of *Coloquintida*, because of its bitterness, may take Trochisks of *Albandal*, which are made of it, in Pills, adding things that may incide and carry off the same Phlegm, especially Gum, *Galbanum*, *Sagapenum*, *Opeponax*, *Ammoniack*, *Bdellium*, *Mastic*, &c. I have often prescribed such Pills for those that were sick in the Hospital.

Idem.

XXVIII. The Phlegmatick humour which is peccant in the Pox may be evacuated indeed by *Coloquintida* alone, but this may be done far more successfully and easily, if Mercurial Medicines be joined with it, or if they be used alone: for Mercurial Medicines use to work far more kindly and powerfully than all common Medicines. Therefore Medicines of Mercury, made both by sublimation and precipitation, are deservedly commended both in purging of viscid Phlegm, and especially in curing the Pox. There are two Sublimates, one they call *corrosivum*, the other *dulce*. Letting the former alone, because of its great acrimony, and great danger of future mischief, leaving that to rash People, I must recommend to every Man *Mercurius sublimatus dulcis*, which is made of the foresaid Corrosive, mixt with crude Mercury, and so sublimed together, after which it arises gentle and sweet, and not corrosive any more.

Idem.

XXIX. Beside the said *Mercurius sublimatus*, as well *corrosivus* as *dulcis*, many sorts of *Mercurii precipitati* are commended, which as they differ in colour, so they do in virtue and manner of operation, whilst some work by stool, others by vomit or salivation. Therefore we must sometimes use one, sometimes another, as there shall be occasion. All of them may be used most commodiously in form of Pills, lest Salivation should be raised before it be required. And whereas here we commend Precipitate for Phlegm, infected with the Poison of the Pox, when we would purge it by stool, you must know, that the most fixt is the properest for this end. For the more fixt *Mercurius precipitatus* is, the less it vomits or salivates, and on the contrary. And among all the Precipitates the *Corallinus* is most commended, which has its name from the elegance of its colour, and is made by abstraction of the acid spirit several times repeated. Such a Mercury therefore variously prepared,

and made choice of according to the occasion, i.e. the different constitution of the Patient, and the various humours found in him, we must use for eradicating of the Pox.

Idem.

XXX. And we must continue so long in taking of Mercurial Medicines, till all the primary Symptoms of the Pox be taken away by means thereof. But we must have especial care that we give them not in too great a quantity; it is best to take them in a small quantity and often, lest by stirring the humours too violently they do more harm than good. For Mercurial Medicines have a strange effect beyond all others; because others usually do their business quickly: But Mercurials are slow in beginning their operations, and long in continuing them, and cannot always either easily or safely be stoppt.

Idem.

XXXI. But the great danger Patients are in from Mercurial Medicines is Salivation, which they easily cause both in purging and vomiting, whereby the Patients are in great danger of suffocation, when the Glands about the Throat are swelled with viscid Phlegm. Prudence therefore is necessary in administration of Mercurial Medicines, which consists especially in a gentle use of them, and an accurate observation of the disturbance which they cause in the Body, before they strongly purge the humours. Mercurial Medicines, I say, use, above all others, to make some singular alteration both about the Region of the Loins, and about the Gums, Cheeks and Throat, and to give certain signs of their following operations. When therefore the Physician hears his Patients complain, after taking Mercurial Medicines, of any trouble about the foresaid parts, he must then carefully observe, whether any evacuation be begun, and whether reaching or any other irritation do promise a speedy evacuation. Which uses therefore to proceed more slowly, because the Mercury is taken up in conquering a pituitous and viscid humour, which must be dissolved before it be expelled. As long therefore as the agitation of the humours proceeds, or increases, so long must we abstain from giving any more Mercurial Medicines, nor must we give any thing more than a little Broth, or some convenient Decoction, by means whereof the viscid humour may more easily be dissolved, and so the operation of the Mercurial Medicine may be holpen. A proper Decoction for this end may be made of Hydroticks and Diureticks, whether it be taken weak, and onely to alter the humour; or stronger, to cause Sweat; or that be preferred, which also evacuates by stool, to the end, the humours that are disturbed, and inclined to evacuation by the Mercury, may be carried more downwards, and less upwards.

Idem.

XXXII. *Mercurius dulcis* is almost a Divine Remedy, in regard of its speedy curing and relieving the Sick, which, when it is well prepared, may be given once in two or three days, with 8 drachms of Lenitive Electuary, for thirty, or, if need be, for forty days together; about twelve grains of it purge a strong Man well, and without any Pain or Salivation. Yet, lest any thing malignant might stick to the Guts, letting alone other Medicines, they must be cleansed every week with *Mel rosarum solutum*, and a Decoction of Tamarinds in Cichory water, with Citron Seeds: For so I remember several, setting aside the Decoction of the Wood, except the second, designed for drinking constantly, have without long and tedious Sweating perfectly recovered, and after that have had very healthy Children. In *Riverius*, cent. 1. obs. 95. a Boy of two years of age, when the Decoction of the Wood would do no good, was cured by giving him 8 grains of *Mercurius dulcis* dextrously, of a Pox which he had got from the Nurse. Another, that was born of an infected Woman, by taking two or three grains of *Mercurius dulcis* with Sugar and Milk, the fifteenth day after he was born for a Month, as *Formis* says in *Riverius*, obs. 26.

Rhodius,
cent. 3. obs.
84.

XXXIII.

XXXIII. N. about 21 years old, a common Whore, was at length pustulous all over her Body, and most horribly afflicted with *Rhagades* and *Gondylomata*, which were exulcerated, about her obscene parts. While therefore I was thinking of a desperate Cure for a desperate Disease, *Mercurius vite* offered it self, with which, for Purgings sake, she began the twelfth day of November, 1625, in this manner; Take of *Mercurius vite* 8 grains, with mucilage of *Tragacanth* make a Pill, after taking of which she had many stools, much matter still remaining, but without any trouble; for which reason the same Dose was given her Novemb. 13. and it only wrought four times. The Dose was increased on the 14th, to half a scruple, it was made into two Pills, and it purged her six times. She having in this manner been pretty well purged, took a Sudorifick Decoction every day twice, with twelve grains of *Sulphur auratum diaphoreticum* for four days. In the last days a caustick Mercurial water was applied. Nov. 19. The Purge was repeated with eleven grains of *Mercurius vite*, which wrought moderately. Nov. 20. The sudorifick Decoction, with an addition of *Sulphur auratum diaphoreticum* was repeated. Nov. 22. She took twelve grains of *Mercurius vite* to purge her, it wrought moderately. Nov. 23. She sweat again. Nov. 24. She took twelve grains of *Mercurius vite* again, and it wrought six times. Nov. 25. The caustick Water was applied again to her obscene parts and other places, where there were deep and foul Exulcerations. Novemb. 26. She purged with this; Take of *Mercurius dulcis* half a scruple, *Diagridium* half a scruple; make it up with Conserve of Roses. On Nov. 27, 28, 29, 30. Decemb. 1, 2, 3, 4, 5, 6, 7, 8, 9. The sudorifick Decoction with the *Sulphur auratum* was continued. On Decemb. 10. She was purged with this following; Take of *Mercurius dulcis* 1 scruple and an half, *Diagridium* 10 grains; it wrought several times. Decemb. 16. She took nothing. On the 17th she repeated the former Dose of *Mercurius vite*; it wrought. On the 18, 19, 20, 21, 22, 23, 24, and 25th days, Nature rested her self, and she seemed perfectly well. But to be sure, on Decemb. 24. she repeated the twelve grains of *Mercurius vite*, and it wrought only thrice. On the 27th the same Medicine repeated gave only one stool. On the 30th she found no operation from it; and so she was perfectly cured of a most grievous Pox.

Horstius,
obs. 10.

XXXIV. Some after universal Purging cure the Disease with these following Pills; Take of *Rheubarb* 10 ounces (10 drachms) *Scammony* 3 drachms; Mix them, pouring on Juice or Syrup of Lemons, of *Quicksilver* tied up in a cloth, so that it may run out in very small grains, 2 ounces and 6 drachms, and may be well killed with the same Juice, and when it is well killed and mixt by often pouring on some of the same Syrup or Juice, add of *Wheat-flower* 2 drachms, *Musk* 1 drachm. Make 5 Pills of a drachm, and gild them well; for, according to *Dioscorides*, Gold does admirably correct *Quicksilver*. Let him take one every day before Dinner, and take them for thirty days. In the mean time, let him take no other Medicine, neither purgative nor applicatory; But let him only drink twice a week 1 ounce of *Fenil-water*, and half an ounce of *Aqua vite*.

Chalmeteus.

XXXV. Though in giving a Vomit for the Cure of the Pox I should not think divers Medicines made of Antimony improper; yet I think they cannot be compared with Mercurial ones, if you do but except *Mercurius Vite*, which is truly an Antimonial Medicine: for it may easily be reduced to a *Regulus* by melting it only with Sulphur. Unless therefore you have a mind to give a Vomit of *Mercurius Vite*, which is an excellent Medicine for the Pox, you may use divers Medicines made of Mercury it self, the Precipitates and Sublimates before mentioned. Among the former the less fixt are to be preferred: Among the latter Corrosive is strongest and most ef-

ficacious, but it is certainly very dangerous. And Precipitates that are less fixt do oftener cause Vomit, than *Sublimatum dulce*, they therefore must be preferred also. In the legitimate use of all which things, we must have a carefull regard to the peculiar constitution of every sick person, and the different operations of Mercurial Medicines consequent to that.

Sylvius de le
Boë.

XXXVI. I know, and that by experience, that not onely the Decoctions of Roots, Barks and Woods, especially the Aromatick, are good for correcting the peccant Acidity in the Pox, but their lixivial Salts also, and especially the volatile, which I recommend to all that practise Physick as things that are good to correct viscid Phlegm, which is peccant in the Pox.

Idem.

XXXVII. Since I think I have proved and abundantly evinced, that the Venereal Poison consists in an acid spirit, but very sharp, mixt with the mass of blood, and as well infecting it as the rest of the humours that are bred of it; it is manifest that the general Cure of the Pox consists in the correction of the acid and sharp spirit. And, because it is wholly preternatural, in the expulsion of it. The correction and amendment of the sharp Acid may be performed by all things that temper an acid Acrimony, as well simple as compound. Among Simples I reckon, 1. Spirituous, volatile things, Spirit of Wine, of Grain, and any other got by distillation after a due fermentation of the mixture. 2. All oily and fat things, as Oil of Fruits and Seeds, by expression, Fat of various Creatures. 3. Lixivial fixt Salts, of the ashes of things burnt, especially of Plants. To which if any will, 4. add watry things, he may for me, though they do not so much temper as they dilute an acid Spirit; in which respect they do conduce, when joined with the three things aforesaid, and they notably infringe the strength of the Acid. Among the more compound things are reckoned, 1. Volatile Salts, arising from a lixivial fixt Salt, and a volatile Spirit, joined either by Art or Nature, such as the volatile Salt of Hartshorn, Urine, of which sort is the Spirit of Sal Ammoniac, *Sal Tartari volatile*, &c. 2. Hither are referred all aromatick Oils arising of a lixivial but volatile Salt, and Oil, e. g. Oil of Amber, Hartshorn, Aniseed, Cinnamon, Mace, Cloves, Majoran, Rosemary, &c. *Galbanum*, Myrrhe, Mastick, &c. 3. Hither belong aromatick Apozemes, made of the aromatick part of Plants especially, boiled with Water, Beer, or Wine, such as we frequently use in the Cure of the Pox. 4. Aromatick Tinctures extracted from the aromatick parts of Plants by Spirit of Wine, whether by Infusion onely, or Decoction, or Distillation. 5. To compound Medicines, which temper the acid Spirit, every Soap may be reduced, made of a lixivial Salt dissolved in Water, and Oil or Fat, by long decoction, which admirably tempers the acid humours, upon account of both Ingredients, especially if it be aptly joined with other liquours, Milk, to wit, and such things. 6. Hither refer Emulsions made of Water and of the soluble, oily part of Seeds. Of all which Medicines for the Cure of the Pox, the most in use are Decoctions of two Roots and of so many Woods, *China*, *Sarsa parilla*, *Guaiacum* and *Sassafras*; to which, both for gratefulness, and for amending the concomitant symptoms and humours, several things use to be added. The Roots indeed temper the acid humour more weakly, the Woods more strongly. Which Woods moreover do yet effectually correct the pituitous humour (with which the venereal Poison mingles and insinuates it self, offending in its too great acidity, which augments it in the body, and makes it more viscid) and so also promote the Cure of the Pox; for daily experience makes it appear, that they are longest and most difficult in curing, in whom a very viscid pituitous humour, known by the name of the melancholick humour, has prædominance. And

And we must persevere so long in the use of Alteratives, and of things that as well temper the sharp acid humour, as correct the pituitous and viscid, when they are found to concur, till you observe them reduced to a good and laudable state, by the functions once being hurt, and now restored: For then, if too great store of them be observed in the Body, they must be carried off and evacuated by proper ways and Medicines. The proper ways for evacuating pituitous and serous humours, are the Mouth, whether it be by Vomit or Salivation; and the Belly, by purging downwards; and the urinary Bladder, by Diureticks; and the Pores of the Skin, by Sudorificks. It is the safest indeed, the pleasantest and gentlest way, to cure the Pox by evacuating the peccant humours with Sudorificks, Diureticks, and things that purge downwards; And it is done sooner, but more difficultly, by Salivation, and sometimes Vomiting, because it is apt also to promote Salivation: And because a Cure cannot always be obtained onely by Sudorificks, Diureticks, and things that purge downwards; sometimes, yea often, we are forced to have recourse to Salivation, both alone, and joined with the others.

XXXVIII. When the Patient has sweat eight days, that the humours may be attenuated, and the body made clean, I reckon nothing is a more present Remedy than anointing with Quicksilver. For by the use of this alone I have observed all to recover; without any danger; yet, stopping the violence of the humours towards the jaws, in the foresaid manner. And this method of Cure is safe, if administered by the skilled in the Art, who must prescribe things accommodate to the supervening Symptoms; erosion of the Gums, swelling of the Tongue and Lips, looseness of the Teeth, &c. which are grievous, yet not to be feared, not one Man (I call God to witness) of many that I have fluxed, dying under Cure. But all of them recovered of the most pernicious Pox; the taking of the Decoction a third or fourth course being in vain. But when the Spitting ceases, and the Strength is recruited, I reckon, the same Decoction must be repeated, for about ten days with Sweat, that all may be evacuated, whatever corrupt humours are remaining in the body after fluxing.

XXXIX. Before Unguents are prescribed, we must diligently consider, whether the Disease be in the Skin, Flesh, Bones, Periosteum, or in the Head, Ribs, Legs or Arms. For if it be in the Skin, it will cause Ulcers or Blisters, or Chapping of the Hands, or Efflorescence of the Skin: If under the Skin, Falling of the Hair: If under the Periosteum, Pains in the Limbs: If in the Bones, Exostoses. Then the consistency of the humour must be considered, whether it be thin or thick: For a thin one buds out in the Skin; a thick one lies under the Skin, the Periosteum, or in the Bone. Then we must consider, whether the humour has corrupted the substance of any part, whether it have made an Ulcer in the Flesh, or a Caries in the Bone. For, according to the difference of these, divers Unguents must be prescribed: For they that cure Ulcers and the Scab, must be gentle, but dry: Things that cure Pain, must be hot and more relaxing: Things that cure Exostoses, must be dissolving and drying. It must be observed, that we must use Unguents a long time: for first, all the sound parts must be anointed, that the humours may be drawn thither: But in the declination, onely the parts affected, that whatever is gathered in the Part may be dissolved exactly. And they must be anointed a long time, that the humour, which lies in deep, may by degrees be melted and attracted, and the thick may be evacuated with the thin: Which few at this day doe, and hence it is, that usually after the use of Remedies, the Disease appears greater, or returns; or that which did not appear before, does then shew it

Rondeletius. self.

XL. Decoctions of the Wood, *Sassa* and *China* must first be tried, especially when the Disease is not much confirmed: For I cannot commend the Practice of some Physicians, who immediately after purging the Body fall to anointing with *Mercury*. But I am not well pleased with this Practice, for it is empirical enough, and void of all reason; and full of a thousand dangers. I tried it sometimes in a Country fellow or two, who were impatient, and desired presently to be cured. One of them could not endure to take Decoctions, and he escaped Fluxing with much difficulty, several Symptoms supervening upon it; yet his body was well purged before, and he drank the decoction of the Wood and *Sassa*, as well as he could, even in the time of Fluxing. Wherefore, as I said, we must not in this Disease presently proceed to anointing, much less to fluxing, but never, unless on urgent necessity, when the Disease is extreme, when other Remedies have been tried, and have done no good, and when there is no contra-indicant.

XLI. We do not without reason commend crude *Mercury*, mixt with Hog's-Lard, and rubbed outwardly on the Joints, because it dissolves the Phlegm all the body over, and then carries it to the conglomerated salival and pancreatick Glands, and causes both a Salivation and sometimes Reaching and Vomiting, and a Looseness. And because the acid Spirit meeting with the Phlegm easily unites and joins it self with it in the Body, they are evacuated and discharged the Body together, and the Pox is cured at one and the same time. And besides Phlegm occurring in humane Bodies, perhaps there is nothing without it, with which the acid Spirit does more intimately and easily mix it self with all its might, than *Mercury* it self. No wonder therefore, when an acid Spirit is naturally mixt with Phlegm according to its very constitution, if preternaturally the same acid Spirit be mixt with it more plentifully and easily, whenever it abounds in the Body. But neither also is it any wonder, if by reason of the same acid Spirit's being both naturally and preternaturally mixt with the Phlegm, *Mercury* it self easily mixes with the same Phlegm, upon which the acid Spirit does presently exert its power, and by uniting it self therewith, does in like manner join it self with the Phlegm mixt with it. And, I think, this is the reason why *Mercury* does good in curing the Pox. And the same *Mercury* provokes a Ptyalism, because mingling it self with the pituitous part of the Blood, i.e. the salival matter, it passes together with the *Saliva* into the salival Glands, and is a cause of the copious secretion of the *Saliva*, which is the cause of a Ptyalism. And when the *Mercury* chancs to cause a secretion of the like pituitous matter in the pancreatick Glands, then there is a plentiful secretion of the pancreatick viscid humour, whereby not onely a Reaching and Vomiting, but sometimes a grievous and very dangerous Looseness follows.

XLII. What was said before of crude *Mercury*, may be said of the Precipitate, or *Sublimatum dulce*; yea, or the Corrosive: For what crude *Mercury* does in carrying the Acid, dispersed in the Blood, to the Glands, the same does *Mercury* both Precipitate and Sublimate by the acid Spirits. For the acid Spirits concentrated in the *Mercury* do cause such an Effervescence in the small Gut with the Bile and Phlegm that either Reaching and Vomiting, or Purging, or both of them follows. For such an Effervescence is required as may disturb and move the humours there confluxant, and may irritate the Guts and Stomach to an expulsion of them. To which Effervescence there always concur acid humours, either contained in the Body and carried to the Guts, or taken from without. And those Mercurial Medicines conduce most to raise a Salivation, which contain least of an Acid in them, as they vomit and purge most, which abound most with a sharp, acid Spirit.

A a a

Ep. Ferdinandus; b. 17.

Sylvius de le Boe.

Sylvius de le Boe.

Sylvius de le Boe.

Spirit. Hence it is, that *Mercurius Sublimatus Corrosivus*, given scarce to the quantity of a grain, Vomits and Purges violently. But *Mercurius dulcis*, made of Corrosive with crude Mercury, may safely be taken to thirty grains, and above, which seldom causes Vomiting, often gives only a stool, and very seldom raises a Salivation. But Salivation is more happily raised with Mercury Precipitate, and not too fixt, to the end, that the virtue on the Mercury being more at freedom, may more easily mix it self with the Phlegm redounding in the Body. Therefore, by reason of the Acid Spirit, mixt with the Mercury precipitate, or sublimate, the same Medicine mixes it self more easily with the Phlegm, by taking of which at times, and intervals, in a sufficient quantity, the corrupt Phlegm of the Body is moved to the Salival and Pancreatic Glands, that it may be thrown out of the Body, and the Pox may be cured by degrees.

Idem.

XLIII. Before Fluxing, the Body must be evacuated, either by Purging or Bleeding; For if much vitious humours abound in the Body, there is fear, lest by Salivating they should run violently to the jaws, and choke the Patient; or flying to the Brain, should cause an Apoplexy or Palsie; Therefore part of them must be first evacuated. If also there be abundance of Blood, it is good to breathe a Vein first. *Fallopins* also, that part of the matter may be consumed, the Inwards may be strengthened, and may not be offended with the Quicksilver, gives a decoction of the Wood for eight or ten days before Fluxing.

XLIV. When an Ointment is made of Quick-silver, killed with Spittle, and with Hog's Lard, *Ess. Arthrica*, Oil of Vipers, and Wax, chafing the Limbs both above and below every other day warm, for thrice or oftner, till purging follow, which must be procured by Stool. When the Mouth, Tongue, Nostrils, and all the upper parts are affected, which might render this remedy suspected; I have often found it very successfull to give every day a Clyster, sometimes Solutive, of *Mel. Rosar.olut.* Oil of Chamemill, and a Carminative Decoction: Sometimes Laxative of simple Oil, by which the Humours may be drawn downwards, a *Diarrhoea*, yea, and sometimes a Dysentery following, which nevertheless we help by Clysters of Milk and Goat's Sewer, as an Episcorallick, to guard and line the Guts.

Sylvesters.

XLV. They that are fumed with Cinnabar, if they then drink Wine (wherewith the Nerves, which were weakened before, may easily be hurt) do often fall into a Palsie. Which often befalls them that have been anointed with Quicksilver.

Platerus.

XLVI. Some reckon that Quicksilver is cold, others, that it is hot: And some endeavour to prove from thence, that Quicksilver is cold, because the Damage done to Mens bodies by it, is cured by the use of heating things, as Sage, Hyssop, wild Marjoram, Clary, Rue, Castor, &c. But these Medicines are not therefore used for preternatural affections from Quicksilver, onely because they are hot, but because they are friends to the Brain and Nerves: And besides, they are good against the Mercurial Virulence by a specifick property. Farther, if they were used, as they are hot, and not as they are good for the Nerves, other hot things, which are destitute of that specifick Virtue, would doe the same.

Sennertus.

XLVII. Some think Sweat should be promoted with Salivation: But if Nature tend to Salivation, it is not good to cause Sweat, lest contrary Motions should be made. However, if nature tend of her self to Sweat, it must not be hindered.

Idem.

XLVIII. We must take care, we do not stop Salivation by Astringents, and that it be not too soon over. It will not be so, if the Mouth be continued Gargling with Salt water warm: It is so far from hindring, that it promotes it rather. But that the Spittle may not be swallowed in Sleeping,

a Nodulus dipt in Brine must be held between the Teeth, so that the filth may run out at the open mouth.

Hartman-nus.

XLIX. When I first began to practice Chirurgery, I was a long time in doubt, whether Women with Child and Children, infected with the Pox, could, without hazard of their health and life be cured by fluxing? The excellent *Nicolas Massa*, did, at length, resolve my doubt, who, *lib. de lue Ven. 17. 3. c. 9.* affirms, it may be done without danger. My own Experience also has confirmed it to be true. A Woman with Child, suckling a Child Twenty Months old, was infected with the Pox, and the Child also. I prescribe her an altering Apozem, and a purging Syrup, which when she took, it purged the Child also. Her Body being sufficiently purged, I ordered her Joints to be anointed gently once a day, even to Salivation; upon which, the Child, though he was not anointed, driveled much Spittle: Wherefore I ordered him to be weaned, that he might not receive any more Mercurial Vapours from his Mother. Thus both the Mother and Child happily recovered: And about six Months after she brought forth a sound Child.

Hildanus.

L. Certainly crude Mercury is a good and safe Remedy for the Pox, mixt with Hog's Lard, or other Unguents and Oils, and anointed outwardly, especially on the Soles of the feet, and Palms of the Hands, and any other Joints: Although Prudence is very necessary if the *Spina dors* be to be anointed therewith; which I would not have done; but when anointing of the Joints is not sufficient, and when no Salivation can be raised, which yet it is not always safe to raise by violence. For the end of anointing with Mercury is Salivation, by benefit whereof, together with abundance of Phlegm, the Venereal Poison is purged out of the whole body.

Sylvius de le Boë.

LI. When the great gland of the Neck, from whence the Salival ducts derive their original, is inflamed, it does not permit the use of Mercury: For a noxious Salivation might be raised by it.

Barbette.

LII. Weakness also in the Nerves prohibits Anointing: for if they that are troubled with the Pox, be subject to Numbness, Palsie, or pains in the Limbs (which yet are not Venereal) Anointing is prohibited; for otherwise the strength of the Nerves would totally be taken away.

Cappivaccius.

LIII. When there is an Ulcer, or any Disease about the Mouth, Inunction is prohibited. And if there be no Disease present in these parts, but has been formerly, if it had its original from the Pox, as an Ulcer in the Tongue, Mouth, or Lips, it does not hinder anointing, because there is no weakness to prohibit it. But if any one, when he had not the Pox, was subject to a Quinsie, he must not be anointed; for it would bring the Quinsie.

Idem.

LIV. When I had caused one to be anointed, so great an inflammation was caused in his Mouth, that he came almost to despair, which, when all other Remedies were in vain, received perfect ease onely from Chicken Broth made without any herbs, the virulence of the Mercury being taken off, as I think, by the benign substance of the Chicken. (See *Sec. XLIV.*)

Pachecus apud Riverium.

LV. *T. Campanella* being sometime consulted by a great Man of Germany; If there were any way to get the Quicksilver, wherewith he had been anointed, out of the Marrow of his Bones, told him, he might certainly doe it, by setting Golden Capping glasses all over his Limbs. And if the German Nobleman followed this advice, it was easie for him to be rid of all his pains, and of his Disease.

Severinus.

LVI. Some teach, that the use of certain natural drying Baths is proper in some sorts of this Disease; which, nevertheless, I have often observed, does no good, but much harm: Unless one have a mind to use them after the cure is exactly finished,

ed, for some refreshment to the Body, that is tired out with Medicines, and to strengthen the Limbs: And then we put into artificial Baths; things that are proper for the Limbs, as *Iva Arthritica*, and such things.

LVII. They that have got the Pox may safely drink the *Span*-waters. For if Metals, by all Mens confession, have a specifick virtue in conquering this Disease, and all the virtue of these Waters comes from Metals; Who can doubt, that these Waters will be propitious to *Adonis* his Boyes? This very way I cured Pocky Blisters as broad as ones Nail, in a Man's Mouth and Tongue. It certainly cures a Venereal *Gonorrhoea*, whatever some Men may think. It is very good for a Dyscrasie of the *Parastate* arising thence. *Solenander*, conf. 37. *Seft.* 3. thought the same. He writes thus; "These Waters are good for *Gonorrhoea*'s and Cancers in the Yard; When the passage of the Yard is cleared with *Unguentum Camphoratum*, the drinking of the Waters will wash, cool and dry the Ulcer, that remains in it, which afterwards, when it is so strengthened, will cicatrise easily."

Meer de A.
aidult.

LVIII. It may deserve the Enquiry, Whether Minerals and Metals communicate any Medical virtue by decoction, to their *Menstrua*, or not, because they are not easily altered in their substance? And it cannot be denied, that they do, by benefit of Decoction, communicate some virtue, though little, to their *Menstrua*, either in some particle of the Metal, Mineral or Stone, or in Smell. For, besides solutions of Metals, Minerals and Stones, made in corrosive Waters, Decoctions also of Glass of Antimony, *Crocus Metallorum*, Tin, Quicksilver, &c. made in fair water, do prove the same, by the virtues which they have, in Vomiting, killing of Worms, and in other Diseases. As for instance, the Antimonial Decoction of *D. D. Lud. ab Hornig*, in which most certainly there is a most excellent hidden virtue against cruel Diseases, if onely crude Antimony, broken into small pieces, be tied in a rag, and a great quantity boiled in Decoctions of Water; but it must by no means be used with Wine. I know that the famous *Zwelferus* never gave an Antivenereal Decoction to any, without crude Antimony tied in a Rag had been first boiled in it: And the following Decoction in the Pox does evince as much. Take of Wood of *Guaicacum* three ounces, of the Bark of the same five ounces, *Sarsa parilla* two ounces, *Sassafras* one ounce, Quicksilver tied in a cloth one pound, Crude Antimony tied in a cloth one pound. Boil them in twelve Quarts of Water to a third, and strain them: The cover of the pot must have a hole in it. Let six ounces of this be given every morning, and sweat either in bed, or in a Stove. The Residue is boiled with water and Raisins, adding a little of the *Guaicacum* and its Bark, and towards the latter end a little Cinnamon (which may also be added to the first) for the ordinary drink. The taking of it must be continued fourteen days. And let the following Pills be given first; Take of *Extractum Catholicon* three drachms, *Arcanum corallinum*, Cinnabar of Antimony each one scruple and an half. Make twenty Pills.

Hofmannus.

LIX. Narcoticks, upon urgent necessity, are sometimes given with very great success, inasmuch as that besides stopping of Pain, they procure Sleep and Sweat, and may, without any harm, as I have often observed, be taken. Upon which account, Treacle does so much good in these pains, both by causing Sweat, and easing of Pain. ¶ Prudence must be used in the Pox, as to the frequency of it, because the thick humour, wherein the virulent quality is inherent, indicates rather attenuation than inspissation. Yet it may be given when night Pains are raging, and also with Alexipharmacks, as with *Extractum Anticephalicum*, &c. A Woman was brought

Platerus.

by Nodes and Night pains to desperation: She took *Laudanum*, for a whole year, twice a day; whereby it came to pass, that at length the Dose being increased by little and little, Nature made this Medicine extremely familiar to her: Afterwards she was ill of a Dysentery, and used *Laudanum*, she took also a scruple of crude *Opium* every day. Thereby, at length, her innate heat was extinguished, her strength decayed, and all her faculties destroyed; she grew stupid, she had a Looseness, then fell into a Consumption and died. *Monsieur de Moent* had an *Exostosis* in the inside of his Thigh, was in great pain, very weak, and dried up with Salivation, yea, and almost quite consumed: He took *Laudanum* often, to cause Sleep, and ease Pain; afterwards he was restored by a good Diet, by many Mercurial Pills and *Anticephalic* Wine, and he perfectly recovered. He was all Melancholick, and amended much after *Sudorificum Joviale*, though he sweat in abundance; but it was from the Mercurial property.

Th. de May.
erne, trad.
de Laudano;
M. S.

LX. Issues are highly commended in the Pox, especially if it be old: for it is confirmed by experience, that they who have Issues, are not subject to the Pox. If the Head be bad, they must be made in the Arms; if the parts below the Liver, in the Legs; if the Womb, in the inside of the Leg.

LXI. In the cure of Buboës, and of any other Symptome, we must not leave off the inward Cure. Yea, it is often observed, that such Swellings, onely by the repetition of Mercury, or of its Oil, do disappear; the Mine of the disease being perfectly taken away by the occult Mineral operation.

Hartmannus.

LXII. Sometimes it happens that Chirurgeons make a mistake in the cure, when after ordinary remedies conveniently used, they think the Patients are not perfectly cured, upon which they cast them into new torments, and at length into an Atrophy and Consumption: When notwithstanding these Symptoms do usually, after a little time, disappear, or are discussed with ease remedies. A certain Nobleman, besides Nightly-pains, and other Symptoms of the Pox, had a Swelling in his Neck, bred of Phlegm and Melancholy: After anointing, all the Symptoms perfectly disappeared, except the Swelling, of which two third parts were discussed. The Patient believed he was not cured; yet the Tumour was discussed in a month's time, onely by applying *Emplastrum de Vigo quadruplicato Mercurio*. Another, after Fluxing, thought himself not cured, because there remained an Ulcer in his Neck about his Windpipe; yet this Ulcer was cured with common remedies within a Month, without any remedies respecting the Pox: One, among other Symptoms, had a great Pain upon his Shin-bone: he was cholerick, and had been four times rubbed, which made him very lean; he used a moistening diet for a Month: afterwards he was rubbed with Mercury all over, whereby the pain ceased; a Pityalism was raised, of yellow, thin and stinking humours for a Month, and then he voided thick Phlegm for fifteen days. At length Incision being made upon the place that was pained before, a *Caries* was found, which, being taken away by an actual Cautery, and a Catagmatick Powder, the Patient was perfectly cured. A Nobleman being cured after the ordinary method, there were great pains remaining in all his limbs, so that he could not stir them without crying out. *Monsieur de Lort* thought the pains proceeded not from the Pox, but rather from a dry intemperature in the Ligaments, that knit the joints and nervous parts. He cured him perfectly with a moist diet, and Bathes, continued a long time.

D. Pomeret
apud River
um.

LXIII. People talk much of a thin diet in this Disease: But because it abates strength much, and keeps it low, it is good in acute Diseases, which, because they last not long, the strength, though

brought low, can continue to the end. But seeing the Pox is a Chronical Disease, and the cure is extended to many weeks, if the strength be brought low by a spare diet, it cannot hold out to the end of the Disease. And the reason why Physicians keep their Patients with Bread and Raisins, I take to be this, Because it is a simple food, and affords good juice: for since variety may easily breed bad humours, and since flesh and fish and such meats, are more easily corrupted than Bread and Raisins, it is good to forbid variety of Meats and Flesh, and to be content onely with Bread and Raisins.

Sennertus.

LXIV. Many commend Biscoe Bread, yea, they allow onely it, which, as we do not disapprove for strong bodies, that are moist, and abound with Phlegm and excrements inclining to putrefaction, rather than with adust ones; so we do allow Bread once well baked, and not too moist, as the best food, and most familiar to all natures. Yea, Biscoe seems to have its inconveniences; for it is not easily concocted, and most people in the Pox have a weak stomach. Besides, these people abound with adust humours, which are increased by Biscoe Bread; on the contrary, they are tempered by the common Bread, as being moi-
 ster.

Idem.

LXV. One had had the Pox sixteen years, with *Exostoses* in both Legs, which pained him so, that he could not sleep all night. I perfectly cured him within a month by bleeding in both the Arms, by purging with an Apozeme, and by a Sudorific Diet-drink of a Decoction of *Guaiacum* and Antimony. Sweat was procured by burning Spirit of Wine. I gave an antivenereal dose once in five days. The *Exostoses* were taken off by applying Blisters, twice or thrice, when they give over running and grow dry.

Riverius.

LXVI. Since it is safer to prevent a Disease, than to cure it, some Physicians, among whom are *Fallopivs*, *Minadovs*, and others, do teach, what way one may save himself from the Pox, though he have to doe with a Pocky Woman. But I think such things cannot be taught with a safe conscience, as incourage so many Men to Lust, when perhaps the very fear of this Disease would have deterred from it. Yet *Minadovs* thinks, they are deceived that teach thus, and he overthrowes *Fallopivs* his foundation, who thinks the Pox is communicated by small serous corpuscles, which, if they be wiped off, the Pox may be prevented. And he shews, that the Contagion does not onely enter by the external parts of the *Pudenda*, but by the internal, and penetrates the Body, and that the infedded vapours and spirits pass by the internal porosityes, and are admitted by the veins; and therefore no Man can promile himself safety from washing, which onely comes to the external parts of the *Pudenda*, or from outward applications, because they cannot take away the inward infection. But the safest way is to keep from Whores, and to remember, that *Whoremongers* God will judge.

Bannertur?

[N. B. The Medicines for the Pox have been so amply treated of all along the Title foregoing, that I shall forbear to recite any more.]

Lumborum Affectus, or Diseases of
the Loins.

The Contents.

The pain must be cured differently according to the variety of the causes. I.

The serous distension of them must be cured with Hydragogues. II.

The pain ceasing by voiding of black Urine. III.

The Description and Cure of a Rheumatick Lumbago. IV.

1. If we would discourse aright concerning pains in the Loins, it is necessary for us to distinguish between the parts constituent of the Loins, and the adjoining parts, that give the occasion. The parts constituent of the Loins, and subjects of Pain, are; the Skin with the fleshy Pannicle; the Muscles lying upon the five vertebrated Bones, on the outside and inside, with the *Os Sacrum*; within the cavities of the *Vertebrae*, the Spinal Marrow, with its Membranes, and a numerous offspring of Nerves, and the membranous ligaments knitting the *Vertebrae* one to another: The parts adjoining, which may hurt by their vicinity or gravity, or by the disposition of the matter, are; the Mesentery joined to the Loins; the lower part of the Gut *Colon*; the two Kidneys, contiguous and sticking to the Loins by their fatty membrane; the Trunks of the *Vena cava* and the *Aorta* lying upon the Loins, and the Vessels arising thence, which are dispersed into the Muscles of the Loins and the Spine, such as the veins and arteries of the Loins, and the Hemorrhoid Veins, which descend along the Loins to the *Podex*; the Spermatick Vessels also turgid with seminal Humour, which, in their passage, impart branches to the Loins; In Women, the Womb with its Ligaments and the Testicles may hurt the Loins; but most in a Woman with Child, because of the weight of the Womb and the Child, which may make the veins and Arteries, that are dispersed through the *Os Sacrum*, to trouble the Loins: The remote parts, which hurt the Loins, are the Liver by the *Ven Porta* and the Mesentery; the Head, when it discharges it self upon the Spinal Marrow, according to *Hippocrates, lib. de Glandulis*, this humour descends by the cavity of the Spinal Marrow to the Loins, and it cannot easily get any farther, because of its division into myriads of filaments. The common causes of Pain must be taken notice of, which are frequently found in the pains of the Loins, as internal rheumatisms of the Humours by the veins, or an intercutal humour falling from the head, between the Muscles and the fleshy pannicle. Oftentimes the branches of the *Vena Cava* and the *Aorta* carry part of the æstuating and exuperant blood out of the greater Chanels into the Loins, and affect them either in the muscular or membranous parts, or in the Spinal Marrow; wherefore the Palsie comes after the Colick, and the Gout turns to the Colick, and in like manner the Colick turns to the *Sciatica*. Besides, external abscesses of the Kidneys, and the affections of the Gut *Colon*, when diffended or exulcerated, are communicated to the Loins. Swellings, Impoathumes and Ulcers, may be formed without and within the Loins. Moreover, the Loins are distorted by a Fluxion or Tubercle. From a Spasim they suffer a divulsion of their fibres. External causes oftentimes cause pain, as falling on the Back, striking with some hard heavy body. If in the beginning of Diseases there be a pain in the Loins, with heaviness and a Fever, it is certain that abundance of hot blood is contained in the great vessels, which being extremely inflamed, except it be prevented in time, may be carried into

into the Brain or Lungs; and that may be done by liberal blood-letting, especially in the foot, to hinder its course. Besides, we ought to suspect pains of the Loins, which continue in Fevers, though blood be often taken away, because the humours lie deep in the region of the Belly, which may commit some violence, unless they be timely purged out. In pains of the Loins Hippocrates bled in the foot. He confirms this in *Coacis*. Pains in the Loins are bad, come from blood; And the hemorrhagies that come from Pain in the Loins, are large and plentiful. He insinuates, *aph. 20. 4.* that Purging is necessary, to empty the load in the belly: And though they that complain of their Loins, have their bellies loose, as Hippocrates writes, that does not take away the necessity of purging. The running of the Hemorrhoids, as it is good for the Kidneys, so also for pains in the Loins, and must therefore be provoked. The perversicacious pain of the Loins, without heat, and an inflammatory disposition, unless it can be discolled by fomentations, after purging and bleeding often repeated, must be carried off by bloody cupping and blisters; or by opening the Skin with a Caustick on each side of the Spine; or with a Bath of fair water, with herbs boiled in it, or an infusion in Bath-waters, and Pumping upon the place affected. For Pains of the Loins are more violent and contumacious, if serous matter be contained within the Muscles to the very vertebra: and they are worse and more difficult to cure, if it reach to the Spinal Marrow. But oftentimes the Symptoms which are thought to arise from parts in the Loins, do not proceed from parts constituent of the Loins, but from parts adjoining, which lying on the Loins cause pain, and transfer their humours to other parts, slowly or quickly, by the veins and arteries, such as the *Vena Cava*, and the *Aorta*, the Hemorrhoidal veins, and the Mesaraick veins, according to Galen.

Riolanus.

II. The Wife of N. was often ill of a serous distention of her Loins, arising from a thin distillation falling violently from the Head, along the Back, towards the region of the Spleen, where, when it had abode two or three days, it at length found its way by discharging it self in abundance of Urine, that was thin and crude. Which distension of the Loins, passed by by Physicians hitherto, I remember I have seen in others, in whom I have seen this painful distension quickly removed, either by a drachm of Root of Jalap, or by fifteen grains of *Diagridium*, and *Creme of Tartar*: The capillary mouths of the *vena sine pari* being undoubtedly opened, which, as it purges *Pus* out of the Breast, and, according to *aph. 54. 7.* phlegm out of the hollow place, which is found between the Diaphragm and the Stomach, so also it expells those serous humours from the Loins by the Bladder.

Tulpius.

III. There came a Woman to me, who made black water, and complained of a Pain in her Loins; And when she began to make black water, her pain ceased; And afterwards she fell into a Nocturnal Fever with shivering; She was of a Melancholick complexion; And I cured her with things that provoke Urine, and she recovered.

Abases.

IV. There is a sort of Rheumatism (See BOOK VI. Tit. de Febre Rheumatismi comite) though it is commonly held not to be of this kind, which may most aptly be called a Rheumatick *Lumbago*, i. e. a cruel fixt pain about the Region of the Loins, reaching sometimes down to the *Os sacrum*, very like a fit of the Stone in the Kidneys, but that the Patient does not vomit. For besides a most cruel and intolerable pain about the Kidneys, sometimes the Ureters all along their passage to the very Bladder, are troubled with the same, but a little less. Formerly this thing imposed on me, as if it depended on some Gravel or gritty matter sticking about those parts, when truly it owed its original to the matter of the Rheumatism, that was peccant and inflamed, which onely troubled those parts of

the Body, not touching the rest at all. This cruel pain, unless it be got away as the former sort, does last as long, and torment as much, so that the wretched Patient cannot lie down, but either leaps out of his bed, or sits upright in it, wrigling his body all manner of ways. Since both sorts of this disease seem to arise from an Inflammation, which both the said *Phænomena* do argue, and especially the colour of the blood that is taken away, &c. they must both have the same Cure. See the place sydenham. before quoted.

Lumbrici, or Worms.

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I. **A** Nthelminticks doe their work chiefly, either, 1. By killing the Worms, and they are things that resist Poison: For whether we consider them, as things that are bred by equivocal generation, by means of putrefaction, or of an animated character and seed, or Egg, yet it is certain they are fed in and with putrefaction. Therefore such things are, 1. bitter and balsamick; for, as they do excellently defend the body from Putrefaction, so also they are the principal things in this case, and all bitter things are Anthelmintick; as among compounds, *Elixir proprietatis*, *Pilule Rusi*, &c. And, 2. Acids, as Vinegar, especially acid Spirits, as of Vitriol, &c. not onely because they resist putrefaction, but because they destroy the motion and heat of the Worms; And therefore are good especially to be taken inwardly. Thus onely a vitriolated tincture of Violets did excellently in a Boy, who was almost killed with the Worms. Thus also all Nitrous things kill the Worms, because they are bitter, resist putrefaction, and because of an Acid Salt that is eminent in them: Therefore Soldiers put Gunpowder to their Shirts, to prevent Lice. And 3. Sharp things pregnant either with a Volatile Salt alone, or with Oil. Wherefore Garlick is reputed to be famous for the Worm in the Heart. If any one carry Camphire about him he is never troubled with Lice: also Spirit and Volatile Salt of Hartshorn powerfully kill Worms. And these things do not onely kill Worms by irritating them, but because of their exceeding

G. W. W.
delius.

exceeding Penetration, whereby they are adverse to their Life; and to putrefaction. And 4. Terreous, Alkaline, and other Lixivial fixt Salts, as Coralwort, the Powder of which Empiricks sprinkle on Earthworms, and so kill them; burnt Hartshorn; Salt of Wormwood, and *Cardus Benedictus*, though they doe it not so powerfully; yet nevertheless they belong to this class. 5. Watry things give onely a vehicle to the rest, unless they be signed with some Mercurial Character. All these things destroy the animated seminary, annihilate and greatly resist it.

Idem.

II. Or, 2. By Suffocating, they hindring transpiration, wherein the life of Worms and Insects consists; Such are all oily and fat things, which obstruct the Pores and check Ventilation, and so as it were suffocate, such as Oil olive, of sweet and bitter Almonds. And though these be commonly too weak, and we cannot so well trust these alone for killing of Worms; yet they are of excellent use, to make other things work better.

III. Or by Melting and Destroying, Such things as dissolve, annihilate and corrupt the mucous and glutinous substance of them, and also by their acrimony are as a kind of Poison to them. Such are especially Mercurials. Nothing under the Sun is so much an Enemy to Worms, and to every animated Seminary as they are; for they consume their aliment, and as it were kill them in an Ideal antidote at least, as appears in the decoction of Quicksilver. For it is not onely adverse to them in Substance, though crude it does not so easily expell them, because it easily passes them by. Wherefore it may be ground with twice as much Sugar in a glass Mortar very fine. Also *Mercurius dulcis* may very fitly be given; And also, which is *Helmont's* experiment, water whether simple or specifick, boiled with Mercury, as if it were influenced by some Mercurial Star, though by the boiling the Mercury loose nothing, it is very effectual against Worms. But we must take notice, that *Glauberus*, p. 2. *fumi Philof.* p. 79. condemns shaking of Quicksilver with water or beer; and especially, because it is said, that the water is irradiated not corporally, but onely virtually, intimating that the subtil particles of the Mercury are by the shaking confounded with the Sulphur; and that this may be demonstrated by the settling. He adds also, that he never saw a good operation, whether from Infusion, or from *Mercurius dulcis*. But this virtue cannot be denied it, though it must be acknowledged, that Mercury is better at killing than expelling of Worms. So also *Cinnabarines* kill Worms, wherefore, though not so well, some go so high, as to affirm, that *Cinnabar* of Antimony, if there be any antepileptick virtue in it, it is onely in a Sympathick Epilepie, arising from Worms.

Idem.

IV. Or throwing them off by disturbing them. Wherefore it is certain, that all Purgatives, properly so called, are Anthelminticks, especially those they call Cholagogues. These, because they act in a twofold manner, not onely as they are bitter, sharp and resinous, all which things are enemies to the Worms; but also as Evacuaters, and as they irritate their exit, they are the best and the noblest Medicines of all to drive Worms out of the Body, especially Aloes, *Coloquintida*, or Trochisks of *Albandal*, *Rheubarb*, *Spec. Diaturbith. cum rheo*, which *Heer*, *observat.* 26. writes very well, that they are most excellent Medicines. Wherefore if there be any instances of great Worms being voided, all, or most of them at least, were performed by Purgings.

Idem.

V. There are yet two other Anthelminticks (which we cannot safely, nor ought to trust) to be added to these ordinary ones, which are yet sufficiently commended by grave Authours. 1. Sweet things, which though as a surfeiting Food they may kill Worms accidentally by repletion, yet these things do not hinder the breeding of them anew.

So some give raisins to Children troubled with Worms, and *Sennertus* says, a Decoction of *Sebesten* is a most experienced Medicine, if it be given to Children every day before meat. So they hold that Honey and other sweet things doe no harm, but good in Worms, because they easily turn to Choler, and so are rather enemies to Worms. But it is evident that sweet things do not turn to Bile equally in all; so that they doe no good in Worms, unless by cheating them, and insinuating them, so as they may suck in Gall and Poison instead of Honey.

Idem.

VI. Whatever divers affirm, that Earth-worms dried and given do by a certain property expell the microcosmick Worms, which might be deduced, from the mucilaginousness, that is in them, and from transpiration being hindred by consequence, or from their volatile Salt; yet, to say nothing, that sufficient experiments are yet wanting, it is uncertain, whether Worms that were voided out of the Body, when they are prepared and taken again, do expell those of their own kind; nay, the quite contrary may be produced, seeing it is certain, that Seeds of Worms are by this means propagated, and Worms are rather bred, according to the experience of many Authours; notwithstanding that upon taking such a Powder several are voided: Wherefore by Mountebanks it is usually vaunted for the best Remedy.

Idem.

VII. When the virtue included is of a middle order, or mixt with others: So the *Italians* have an easie and no contemptible Medicine for the Worms; it is Ly mixt with Oil-olive; and they give it with good success.

Idem.

VIII. They must be mixt with sweet things, so they are strongly drawn downwards by a Milk Clyster, so Medicines may conveniently be given with warm Milk, that with this Vehicle they may take the Poison: So Wormseed is taken with Bread and Honey, that they may be allured in that manner: So for the same end *Spiritus Vitrioli Philosophicus* is mixt with Sugar.

Idem.

IX. They must be given upon an empty Stomach, and another thing must not presently be given after them: for when they have any other Food, that which is ingratifull and contrary to them is neglected by them. And this holds good especially in round Worms, and it is not improper in broad ones.

Idem.

X. Mercurial Medicines want a Quickner, but cannot so safely be given to Children. Therefore *Glauberus*, l. c. says, That *Mercurius Dulcis* given to Children for Worms, does usually (unless they be all the stronger) cause a Weakness of the Limbs; For at that Age all things are fluxible and lax; especially the Bones and Nerves; but Mercury is an enemy to these, and so easily hurts.

Idem.

XI. Medicines must sometimes be changed, lest the Worms should be used to them, especially in a more grievous case, where there are abundance of Worms, and those Worms come not away.

Idem.

XII. External things must be applied to the Navel, and not to the Stomach, unless they come near it. Not onely because the Navel is more perspirable, but because it is the Centre of the *Abdomen*; and therefore when Worms are in the Guts, the virtue of Medicines may more easily be communicated to them, but these external things must onely be used for a help.

Idem.

XIII. Anthelminticks are not universal Medicines. *Langius* and *Hauptmannus* their hypothesis is sufficiently known, concerning verminous putrefaction, its being the Cause in a manner of all Diseases, Pains and Ails, and usually of Death itself; concerning which there is extant a Piece called *Hauptmanni Pathologia animata*. But as it cannot be denied, that Worms are among Causes of Diseases, so to extend them to be a Cause of all Diseases is absurd.

Idem.

XIV. E.

XIV. Evacuation is usually made by three sorts of Medicines, either by some sweet and lenient things, by things which act by their whole substance, or by strong Purgatives. Sweet Lenitives do not carry off dead Worms: Sweet things get Worms out, because they are allured and got out with the sweet food, which loosens the Belly. Things that act by their whole substance carry off the live and dead without distinction: And the strongest Purges are bitter, so that at one and the same time they can both kill and carry off: Therefore things that kill Worms are in vain given before Purgatives.

Saxonia.

XV. They are mistaken, who to kill the Worms use any slight Medicines, which have but a small virtue to kill them: for Worms, by their expulsive faculty expell bitter things that are but gentle. We may observe this, when Children are troubled with Worms and with a bilious *Diarrhea* at the same time: for Bile, which is naturally bitter, does not kill them. Wherefore unless we have recourse to strong Medicines, as to Aloes not washed, or to a scruple of Mercury made into Pills, with a little Aloes and Turpentine, we do nothing.

Sanctorius.

XVI. To evacuate the matter of which Worms are bred, that is, Phlegm, *Species Hiera* are reckoned good, if it reside only in the first ducts: But if in the whole, Agarick, not Rheubarb, (which many use) for though by its bitterness it be good to kill Worms; yet it does harm, as it purges Bile, and not Phlegm, and when the Phlegm is left, Sleepiness, Epilepsies, Apoplexies and Death follow. Agarick therefore is good, because it purges Phlegm, and by its bitterness kills Worms.

Capivaccius.

XVII. Women commonly give Wormseed in Comfits, or the bare Seed mixt with Honey. It is an excellent Remedy: for Worms, being greedy of sweet things, devour the Honey, and with it the Seed, which kills them. But, because it is very hot, it may be tempered, if it be infused for two hours in Vinegar, and then mixt with Honey, boiled up to the form of an Electuary, which *Amarus* commends as the best Medicine for the Worms.

Rivierius.

XVIII. When Worms are voided in acute Diseases, as in burning Fevers, and other Diseases of old Men and Children, we ought not presently to turn all our intention on them, as the good women, and Physicians that humour such women, do; which is a reason, why Patients die, when the Disease is neglected. Wherefore the Physician must carefully consider, whether the Fever depends on the Worms, or whether Worms be voided for some other reason, which are always contained in the Belly. And if you find the Fever comes from some other cause, perhaps it is a quartan, tertian or quotidian, and if no symptom be very urgent, they must be neglected, or only such Medicines given as are proper for the principal Disease and for the Worms.

Aletius.

XIX. Though in round Worms it be good to mix Purgatives with things that kill them; yet in broad Worms it is better not to mix Purgatives at first with them, because the Purgatives do not suffer things that kill the Worms to stay long in the Belly; but quickly purge them off. But if Medicines be first given to kill them, they roll themselves round like a Ball, and are so voided, and the Party recovers, as the Authour, *lib. 4. de Morbis*, writes.

Bennertus.

XX. The Medical Intentions are to kill the Worms, to expell them, to hinder a new growth of them, and to prevent symptoms. But, first of all, it is convenient to rid the Stomach and Guts of excrements and of food for the Worms by some gentle Purge: for we may not give a Vomit, lest the Worms should be drawn from the Guts into the Stomach, where they might cause more mischief. I know, indeed, it is the common opinion, that we must use bitter things, but I am quite of another opinion, preferring sweet things far before them, to withdraw the Worms from gnawing the Stomach, and to dispose them for voiding by stool. Where-

fore I presently give four ounces of *Manna* in Broth altered with Cinnamon, drinking three hours after it a dilute *Massa* made with Barley water, and that the Worms may be drawn downwards, and the Guts washed, in the evening I order a Clyster of Milk, Butter and Sugar. Then we must proceed to killing things, as Oil of bitter Almonds, of Peach Kernels, Wine of Infusion of *Scordium*, Spirit of Salt, Oil of Sulphur, Spirit of Vitriol, and the Poison of Worms, the distilled water of Garlick and Onions. I take care of the symptoms; and especially their gnawing; for sometimes by gnawing the mouth of the stomach, they cause Death; in this case we must act with gentler things, and abstain from bitter, sharp and other such troublesome things, instead of which a Pint of Milk, or more, with Sugar may be given; for, being enticed, they leave off gnawing, and turn to the Milk, as being sweet and amicable to them.

Fortis.

XXI. The acid Spirit of Vitriol, Sulphur, and the like, are commonly used to kill Worms, which I do acknowledge have the faculty to incide Phlegm, and kill the Worms, if a few drops be mixt with the ordinary drink, and the taking of them be continued for some time. But they are not good for all alike, because they augment the Acid in the Body and the Appetite, which is oftentimes too great in Children. Wherefore, unless they be very thirsty also, I had rather use volatile Salts, and bitterish Plants.

Sylvius de le Boë.

(See BOOK IX. Tit. of Childrens Diseases.)

Medicines especially made use of by eminent Physicians.

1. The most effectual Remedy for Children and others is, to put a piece of salt Flesh, the Fat being scraped off into the anus in form of a Suppository, and to let it be in as long as it can be endured, then to give a Clyster of Brine or a Decoction of Centaury, and we must often repeat this Remedy.

Ætius.

2. Spirit of Turpentine is a good Medicine for the Worms. ¶ Nothing is better for killing of Worms than Wine and Spirit of Wine.

Bartholiquus.

3. The seed and distilled water of Purslane is an excellent Medicine to kill Worms.

Baricellus.

4. St. John's-wort is a Specifick for Worms in the Stomach applied in manner of a Cataplasm, and given in Broth.

Quercetanus.

5. Coral-wort is a most excellent Remedy against all Worms. The Dose 1 drachm. ¶ The seed also of *Santonicum*, Tanfie, *Primerose-root*, *Scordium* and Goats Rue are good. ¶ Fern is commended especially for killing of broad Worms, from which a water is distilled, or half a drachm of the powder is given to Infants, 1 drachm to those that are a little elder, and to those that are of ripe years 3 drachms in water of Goats Rue, which kills the Worm without any trouble. Above all compound Medicines, *Diaturbith cum Rhabarbaro* is commended in Trochiscs. Among temperate things, *Sebesten* is the most tried Medicine, a Decoction of which may be given to Children every day.

Semertus.

5. I have often observed this to be very effectual in killing and expelling of Worms: Take of *Coloquintida* 1 drachm, Oil extracted out of *Coloquintida* seeds half an ounce, Treacle half an ounce, Myrrhe, Aloes, Dittany, Gentian, Tormenill, Wormwood, each 1 ounce. Make them into powder, and with a Bull's Gall and Rose-vinegar; make an Unguent to be laid all over the Belly and Navel.

Vid. vidius.

Luxatio,

Luxatio, or, Putting out of joint.

The Contents.

Reposition must not be attempted before the Inflammation be laid. I.

Nor if a Ligament be broke. II.

Strengthening Applications must not cool and dry. III.

The Cure of a luxated joint, when it falls out after restitution. IV.

If an Inflammation supervene, when Reposition must be made? V.

The Reduction of the Spine luxated inwards. VI.

The Reposition of the luxated Thigh, must not always be attempted. VII.

The Restitution of the Shoulder slipped into the Armpit. VIII.

The Luxation of the Os Coccygis restored. IX.

Contusions of the Nerves (which we call Strains) must not be treated like Luxations. X.

Medicines.

I. IT is not without reason, that *Celsus*, l. 8. c. 11. advises, that whatever in Dislocations is displaced, must be replaced before Inflammation. But if a Chirurgion was not called at the beginning, so that the part is swelled and inflamed, a thin Diet must be prescribed, and the Body must be purged of bad Humours: A Vein also, if it be necessary must be opened, and Repellents must be applied to the part affected, till the Severity of the Inflammation is a little abated, then the Operation must be tried; but care must be taken, that all things be done gently; they that doe otherwise, oftentimes occasion great symptoms, and sometimes, death it self. A Girl, leaping often to the ground, had wrenched her feet a little, and when a Pain and Inflammation arose, an Empirick was called, who so extended and wrenched her feet to and again, that the pain and inflammation increasing, Abscesses followed, and round the Joints of the feet in divers places sinuous Ulcers, out of which a serous Humour ran. The Pain in her Joints was so great and pungent, that she could scarce stir her feet, and was not able to walk.

Hildanus.

II. Before the Chirurgion undertake the Reposition of any luxated part, it is necessary that he first try well, whether a Ligament be broken: For, if he understand this, because the part cannot move, it is more adviseable to hold his hand, than rashly to undertake the Cure, to the Ignominy of the Art.

Walrus.

III. Swathes, that, besides Astringents, they may also keep off an Inflammation, must be wet in a Mixture of austere Wine and Oil of Roses, because, when they are dry, they do not stick well. Others besmear them moderately with *Ceratum Hippocratis humidum*, which *Galen*, l. 6. de Comp. Med. per Gen. c. 4. describes. And here Medicines must be avoided which are made of astringent Powders and whites of Eggs, because they either cool and dry the joint too much, so that the bending of it is hindered, or they stop the passing out of the influxed humours. The *Ceratum* is made of one part Wax and two parts Oil; as for example, white Wax one ounce, Oil of Roses two ounces.

Scultetus.

IV. A Joint slips out again for three Reasons:

1. When it is not well replaced, and the Ligaments are not well dried. 2. When there is any Tumour after an Inflammation. 3. When some Humour runs to the Joint, which makes lax the Ligaments. The first Cause requires great Driers. The second, Emollients and Discutients. The third requires the worst, after provision for the whole, Burning; than which nothing is better; for it will waste, 1. the moisture by the Crust, which makes a hollow Ulcer, and being covered with a Cicatrice contracts the relaxed part: for by Burning we heat, dry and digest the Humours. But note, 1. We must burn the place, on which the Bone falls; as, if the Shoulder slip below the *Ala*, under the Armpit. If

the head of the Thigh be luxated forwards, it must be burnt before in several places. 2. Nervous parts, Ligaments, Veins, Arteries and Glands, to which Fire is an Enemy, must not be burnt. 3. We must not burn with Irons, which make a little Elchar.

4. The Joint must be kept quiet for several days. *Idem.*

V. The time of extension is laid down by *Hippocrates*, de Artic. § 64. to be immediately after luxation, while the part is still warm. But if because of want of a Chirurgion it cannot be done presently, let it be done the second or third day, unless we be forced to desist by reason of an Inflammation, which prevents it: for it is observed, that if Extension be attempted, restitution does not succeed well; but many inconveniences follow it. Wherefore *Fallopins*, de Luxatione, c. 3. says, I advise you ever to have a regard to the time, not exceeding the third day at most: and if the third day be past, we must tarry till the Inflammation is over, and till there be no danger from it. And the seventh day is *Hippocrates* his day, 4. de Artic. 65. to which the Patient must be kept with a low Diet. Therefore if Extension cannot be made the first three days, we must tarry till the seventh. The time in which you may restore it is the first, second and third, or at least the seventh, eighth and ninth days; but the tenth, eleventh and twelfth days, and after are not safe; because then a *Callus* is bred. *Idem.*

VI. The general opinion is; that the Spine luxated inwards cannot be restored: Yet an ingenious and expert Chirurgion will not leave his Patient without Remedy. In old People *Hildanus* tries the Reduction, first, indeed, by Extension, and Concussion of the Spine sometimes to the right and sometimes to the left, and by lifting up the Belly on high by Instruments described by *Oribasius*, lib. de Machinam. c. 35. and by *Parvus*. Then by Incision of the Back to the luxated *Vertebra*, and by elevation of the *Vertebra*, which after Incision must be taken hold on with proper Instruments by the Appendix.

VII. If at any time the Thigh-bone be out of its place, it must needs be quite out: for because the Head of it is round, it cannot stay on the Lips of the *Sinus* or Acetabulum, so as to make a *caput squarum*, or a Distortion, which is commonly called Semiluxation or Straining: But it must of necessity either return into the *Sinus*, or fall besides; and any other body of a globous figure, set upon the edge of any Vessel, cannot be firm, but of necessity must fall either inward or outward. And when the Thigh is so perfectly out of Joint, though it be not put in again; yet the Patients do in process of time so far recover, that they can walk without help of a stick. *B. Jordanus*, a Chirurgion of Padua, experienced this in a certain Man, whose luxated Thigh could not be restored, because he had broke his Leg, which ought to have the greater care taken of it.

VIII. *Hildanus*, cent. 5. obs. 86. shews the way, how the Shoulder luxated under the Armpit may be restored, which the modern Chirurgions highly commend. There he shews the various uses of his *Remora*, and Girdle, and tractorie Machine which he invented. But upon my own experience I find, that if Luxations of the Shoulder downwards cannot be put up with the Hands, they may more easily be restored by *Hippocrates* his *Spatha*, than by *Hildanus* his *Remora*.

Scultetus.

IX. A Nobleman, falling on his Back, hit the end of the *Os Coccygis* so hard against a sharp Stone, that he put the Bone out of joint. Upon it he grew immovable. The next morning seventeen hours after his fall I find the Patient very feverish, not able to move a Leg or a Foot, and not far from Convulsions: He complained especially of an intolerable Pain about his anus. I had some suspicion he had broke some Bones, but I found all whole, onely about the *podex* all was fuggillated: And putting my Finger into the anus, I was ascertained, by the turning

ning in of the end of the *Os coccygis* that the *Coccyx* was out of joint. I presently gave him half a drachm of fixt Salt of Vipers in Chervil-water: afterwards I laid the Patient on his face, with his body and buttocks elevated, and his feet hanging down. Afterwards (according to *Paulus*, l. 6. c. 98.) I put the fore-finger of my left-hand anointed with Fat that had never been salted into the *podex*, and I bended it by little and little, then I set my thumb on it outwardly, and thus by drawing and squeezing, I made the Bones to crack, and reduced them to their natural situation, upon which his Pain and all things were well. Left the Bone should fall out again, I order the *podex* to be often fomented with a warm decoction of Oak-leaves, Acorn-cups, Red-roses and Pomegranate-flowers. The place affected was fenced with *Ceratum Vigonis*.

This Bone was so forced back in a Gentlewoman after a hard travel of her first Child, that her excruciations came away involuntarily from her always. Ten years after, I was consulted, I advise her to let the Midwife try whether she could force the Bone back again with her finger. She tried, but without any effect, for she could not hear the Bone crack. But afterwards the business succeeded well, by anointing the place often with Oil of Worms and white Lilies, and so being mollified; afterwards the place was fenced with *Empl. contr. ruptur.*

Misc. Cur. an. 72. obs. 35. *Wirtzii*. ¶ *Adr. Spigelius* restored a Gentlewo-

man's *Os coccygis*, that was luxated in travel, one-ly by a Swathe.

X. *Fab. Hildanus*, in *Cent. fol. 167.* warns unwary Chirurgeons, that in Contusions of the Nerves (which we call Strains) where no manifest Luxation appears, they do not wrest the Limb this way and that, nor try to replace what is not dislocated: for great Inflammations, Pains, Ulcers, *Caries* of the Bones and Death often attend such foolish operations.

Rhodus, obs. 80. cent. 3.

Hæferus.

Medicines especially made use of by eminent Physicians.

1. This Unguent is admirably commended by the Vulgar for Luxations, and other external Discales, where the Skin is whole and not hurt; Take of green Sea Wormwood a Peck, of Comfrey as much, gathered fourteen days before *St. John's-tide*. Let them be shred and boiled for 2 hours in 10 pounds of *May butter*. When it is strained, put to it of Goat-suet two pounds, Badger's-grease 1 pound, Wax half a pound, Turpentine 2 pounds and an half. Melt them on the Fire; when they are taken off, add of Oil of Juniper 4 ounces. Mix them.

T. Bartholinus.

2. A Pultes made of the Bulb of Daffadil helps them, who in going have put their Leg or Ankle out of joint, or when any part is out of its natural fire.

Pet. Laurent. bergius.

A GUIDE TO The Practical Physician.

BOOK XI.

Of Diseases beginning with the Letter M.

Macies, or Leanness.

(See Atrophía, BOOK I.)

The Contents.

Whether Salt things cause Leanness? I.

Whether fat things do make fat? II.

How Diureticks doe good? III.

Drinking between Meals is good for lean people. IV.

How the use of Poppy, Henbane, &c. is good for them? V.

Medicines.

I. IT is a Question, How the Limbs can be wasted and emaciated by a Salt Bloud: for *Plutarch*, in *Quest. nat.* I. writes, that Plants are not at all nourished with Salt things; because such food is earthy, and consequently cannot be fit to nourish. *Theophrastus*, 6. de causis, Plant. 14. inquiring the reason, Why all tastes, but a salt one, are found in Plants? says, It is because what is of a salt taste, is not fit to nourish. For an instance, he says, Fishes which live in the Sea, are not nourished with Salt-water, nor salt Juices, but either with sweet or acid things, or with other things, that are found in the Sea: wherefore, in this regard, it is manifest, I might very well say, that a salt bloud did extenuate and emaciate, because it is unfit to restore the parts, that are consumed every day. The same *Plutarch* is of the contrary opinion in the same Book, qu. 3. vel 4. where he writes, that Shepherds use salt to fatten their Cattel; Wherefore, if Cattel are fatted with salt, it cannot be said, that bodies must necessarily be consumed by a salt bloud: Yea, he adds, that *Apollonius* the Physician, Scholar

to *Herophilus*, used to restore and fatten emaciated Bodies with salt things. We must say, that salt and salt things, may, in some sense, conduce to make fat and nourish; and, in another sense, to consume and waste, principally and of it self, to wit, for the reasons assigned by *Plutarch* and *Theophrastus*, since salt things are dry, and therefore contrary to aliment, for which reason they make bodies dry, and are not converted into the lost substance. But by accident they may conduce to fatten and nourish, to wit, by causing an Appetite, and which especially happens, by carrying the nutriment into the parts. If salt things indeed be mixt with other Aliment, they are as certain vehicles to carry the aliment to the parts, and as wedges to fix it there. ¶ *Pliny*, lib. 10. c. 73. writes, that Salt is given to Cattel, to make them drink, and so to make them fat.

II. Another Question arises concerning the course of Diet: for, *Hippocrates*, lib. de salub. Dieta, shewing the way, how to make fat bodies lean, says, They must be fed with fat-meats; and the reason he brings, is, because fat things quickly satisfy, though they do not fill: He subjoyns in the same place, If we have a mind to make gross, we must take the quite contrary course. *Rhazes*, *Avicenna*, and almost all the *Gracians* are of another judgment, who advise the eating of fat victuals to make folk fat. For a determination, we must say, That the use of fat things may either be moderate or immoderate; and fat Meat may either be a little or very fat: The immoderate use of fat things, or of things that are very fat, are far from fattening, because they doe precisely, what *Hippocrates* says: But meats that are not very fat, and the moderate use of them, conduces much to making people fat; and of such things must this opinion of the *Arabians* and *Gracians* be understood. Mercurialis, lib. 1. de morbis puerorum.

III. And all Diuretick Medicines conduce to carry the Meat to the part: for they both open the passages,

Idem.

passages, and are as it were Vehicles to carry the juices and aliment to the part.

Idem.

IV. So also drinking between Meals is good: And they that in general condemn drinking between Meals, for emaciated Bodies, are much deceived: for, Galen himself, 7. Meth. commended drinking between Meals as good for consumptive Bodies; and it is almost always observed, that they who use to drink between Meals grow fat.

Idem.

V. And those things conduce most to fix the Meat to the parts, which do moisten with a certain tenacious and viscid humidity, i. e. hot in cold bodies, and cold in hot and dry bodies. And this is the reason why Rhazes and Avicenna commend Popy, Henbane, and several other things, which are very cold, for moistning of bodies. Upon this account Lucretius says, That Goats grow fat with Hemlock, to wit, because these Animals are hot and dry, and therefore their heat and driness are tempered with cold things, so that they digest their nutriment. For we must not think that Goats or Starlings grow fat onely with Hemlock, Nature thereby onely makes way to grow fat. ¶ Mercurialis, from the common opinion, concludes, that Popy, Henbane, &c. are cold; whereas, according to the modern opinion, they are hot. Now they doe good, either by procuring sleep, with which it is certain that bodies grow fat; or because they thicken the juices, that are thin, and apt to disperse, and so make them stick better to the part.

(For the Medicines, see Atrophia, BOOK I.)

Mammarum Affectus, or, Diseases of Womens Breasts.

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Medicines.

I. **W**E must be cautious, how we apply Hemlock, Henbane, and such Narcoticks; and they must by no means be applied to such as intend to give suck: for they debilitate the innate heat, and extinguish the galactopoietick faculty in the Breasts. Astringents are the most proper to apply to Maids; but for Women, whose Breasts are drawn too big, by giving of suck, Driers and Discutients are most proper, whereby the excrementitious moisture remaining is consumed and discussed.

Sennertus.

II. When the Breasts are inflamed, we must use Repellents at first, yet not strong ones, by any means, lest the Heart be too much cooled, or the humour

should strike to it; but temperate ones, with which we must mix things that have a digestive and a discutient faculty. R. a ca. stro.

III. If an Erysipelas seize one, at the first coming of the Disease, such a cure must be insisted on, as is proper for an Erysipelas; and coolers, astringents, repellents, or fat things, must by no means be applied to the part affected, but dissolvents: giving Sudorificks immediately at the first, to the end, the more subtile part of the blood, which is inflamed, Sennertus. may be discussed.

IV. In an Oedema of the Breasts, dissolving and discutient Topicks, and also things to strengthen the Parts a little must be used; yet we must have a care that we do not apply over-hot and discutient things. Because hot Topicks may easily draw Blood to the Breasts, which are a fungous part, and this being mixt with Phlegm, affords matter for tedious and dangerous Tumours: And strong Resolvents discuss the more subtile parts, and leave the grosser; Idem: whence come Scirrhi.

V. Two things must be observed about a true Scirrhus of the Breasts. 1. That the thinner parts be not discussed by the excessive use of heating and attenuating things, and the thick ones left, whence comes a stony and incurable hardness. 2. That by the use of moistning and emollient things, the matter be not as it were fermented, especially if it be mixt; and so of a Scirrhus it becomes a Cancer. Therefore the emollient things which are here applied, must be hot in the second degree, and temperate as to the passive qualities, so that they must neither be dry nor moist, and in this differ from maturaters, because they are moist. And this caution is more necessary in a Scirrhus arising from melancholy, than in one arising from phlegm; for a Scirrhus which comes from melancholy, easily turns to a Cancer. Therefore the advice of the Ancients is the safest, that no drying or moistning medicine be used alone: but either moistning and emollient things must be used with digestives by turns, or Moistners must be mixt with Digestives. If it be a Bastard Scirrhus, and there be fear that it will turn to a Cancer, seeing there is some pain, that may cause an afflux of Humours, some things must be added to Emollients, Idem: which may hinder the flux of Humours.

VI. A Woman of her first Child had a red, hard swelling arose in her Breast from too much Milk. Mayerne took it away perfectly, in two days, by anointing the Breasts with warm Honey three or four times, strewing on every day some Powder of Cork: And with the like success he used in others Oil of Myrtles, and powder of Horse-tail, but with a different Intention: for these repell, and the former discuss. Velchius, obs. 32.

VII. It is not always safe to try to maturate Strumae in the Breasts, since it may easily so be, that Maturaters may corrupt the matter, and the Tumour may turn to a Cancer. Women also will rarely endure cutting, and besides, such Tumours last a great many years, without any great inconvenience; nor do they in this place appear to the Eye, as they do in the Throat. Sennertus.

VIII. Women put off opening of an Impossthume in the Breasts as long as they can; but it is to their prejudice, for, 1. The fibres are corroded. 2. The Membrane is too far extended. 3. The Bone is corroded; whence comes a perpetual Flux. Frid. Hofmannus.

IX. Ulcers in the Breasts are never happily nor easily cured, if the Woman ly-in or give suck, before the Milk is dried up, and the motion of the blood to the Breasts is stopt: For, since no Ulcer, unless it be without filth and dry, can be cured; as long as there is any afflux of humours thither, the cure will never succeed aright. ¶ We must know also, that one sore breast can hardly be healed, unless the Milk be dried up in the other that is well: for the blood comes out of the veins alike to them both. It may be dried up, if the Child

Sennertus.

do not suck; and if Linen-clothes wet in water, be laid to the Breasts.

R. à Castro.

X. Sometimes lying in Women are troubled with too much Milk, which the fat of Serpents, anointed on the Breasts, does dissipate, by a peculiar property. Namely, not onely repellents do hinder the afflux, but attenuants also do make it either quickly run through the Nipple, or go back to the Womb within seven days. To which end, Sir Theodore Mayerne, Physician to the Queen of England, applied *Diachylum Ireatum* with Powder of Sage and Oil of Roses, and with very good success. Some commend Parilly, or Pimpernell with the Blew flower, bruised and applied.

Vesalius, obs. 3.

XI. Hippocrates 2. Epid. Sect. 3. says, That the shoulders and breasts are puffed up after meat and drink: In which words he shews the first generation of Milk, which is bred of the sweetest juice, that the breasts and parts thereabout, especially the shoulders, draw to themselves out of the Stomach, and turn it into Milk. And this, above all other things, may be proved by the sensible testimony of the Nurses, who, as soon as ever they have either taken meat or drink, feel the matter of the Milk manifestly to run into their breasts; which farther testifies, that this humour comes down from the shoulders, by the *clavicles*, to the breast: and they say, they feel it more evidently, while the Child actually sucks. Whence it comes to pass, that nothing diminishes Nurses Milk more, than setting Cupping-glasses to the back, which thing is well known to Nurses, that they often refuse this sort of remedy, lest they should want Milk. ¶ It is the firm opinion of many, that blood does not afford matter to the Milk, but that the chylous, milky juice affords it, which is carried by peculiar Milk-vessels, to the Breasts, and to their *Tubuli*. And perhaps that remarkable chyloferous duct does contribute much to the carrying of that matter, for the breeding of Milk, arising from the *Pancreas* thorow the breast, along the *Aorta* and *Vertebra* to the very Neck, which inserts some branches into the subclavian and jugular vein.

Martianus, com. in cit. loc.

XII. Women, that give suck, have their breasts often grow hard and painfull, with an afflux of Milk; which may be cured in one days time, if the warty matter be often drawn out by sucking. This evacuation being neglected, or deferred, they grow harder and harder every day; yea, are inflamed; and so in this case Venæsection, Purging, Coolers, &c. are proper.

Barbette.

XIII. Sometimes breeding of Milk fails, through some fault in the blood, but especially through some fault in conformation, if the vessels, which tend to the Breasts, be too small, and it may be too solid. This fault, I think, must be cured slowly, and by degrees, in part at least; and indeed by frequent and gentle friction of the place, by which the Blood-vessels tend to the Breasts, adding emollient Unguents and Oils, by means whereof the Coats of the Arteries may be softened, and made lax, and by degrees made fit for enlargement; that being enlarged, they may carry more blood to the Breasts. But we must take great care, lest by violent or long rubbing, the glands of the Breasts should be broken or hurt, and so an occasion given for an Inflammation. We must not make haste therefore, but we must proceed slowly in the amendment and mutation of the parts, especially of the continent, from their natural state, because it is difficultly and slowly obtained.

Sylvius de le Boë.

XIV. We must take great care, that Imposthumes, especially in the Breasts, may not onely not be bred at all, but that such Inflammations as cannot be prevented, may come quickly to suppuration: And indeed, 1. that the manifold mischiefs subsequent or concomitant to Impo-

sthumes may be avoided. 2. That the Imposthume, being contained in a little room, the fewer parts may suffer damage. 3. That by the *Pus* continuing long in any one place, and growing gradually more and more corrupt, more parts be not hurt, and especially Vessels, because the hurting of them prejudices health far more than the corruption of any flesh. For we must take notice, that in every suppuration, besides the blood it self, or Milk, that must be turned into *Pus*, the neighbouring and circumjacent parts are often corrupted, but first the fleshy and soft, and the membranous more slowly, and therefore the vessels themselves, which being more firm and tenacious, use longer to resist corruption and corrosion. Hence, whenever after an Inflammation, and a subsequent suppuration, an Imposthume in the Breasts is opened, either by art, or of it self, and some of the lactiferous *Tubuli* are also hurt; whether this come by a great Suppuration, or by the Chirurgion's thrusting his Lancet too deep into it, the Milk comes out at ways where it should not, that is, by the Orifice of the opened Imposthume, and not by the *Tubuli* of the Nipples.

Idem.

XV. And as we must endeavour, that all these things may be done, so also we must doe what in us lies, to draw the Imposthume to the external parts, and to the surface of the Body: for Imposthumes that lie deep in, can neither be opened of themselves, nor by Art, unless with the hurt of several parts. When they open of themselves, this happens, because the *Pus* makes its way slowly to the surface of the body, which in the mean time corrupts several adjoining parts also, and now and then the vessels. When Imposthumes are opened by Art, it comes to pass, that while the Penknife must be forced deep in, the Chirurgion may easily cut some Lactiferous ducts, and so occasion the coming out of the Milk by improper ways. And this must therefore be especially avoided, because the cure of the Imposthume, or rather of the Ulcer remaining after the Imposthume is open, is far slower: for vessels and ducts continually pouring out Milk, are difficultly and slowly healed and closed with flesh, because hollow Ulcers remaining after an Imposthume, cleanse and fill slowly. And the effusion of Milk, by the said Ulcer, cannot be cured, till the said broken or eroded vessels, be healed with new flesh, or at least so fenced with it, that it may give a natural passage to the Milk, if any such thing can be.

Idem.

Medicines especially made use of by eminent Physicians.

1. The soft Leaves of Ash boiled in Water, and bruised, and applied hot, assuage the Pains of sore breasts; and the constant use of them does wonder-fully discuss. ¶ Drinking the juice of River Crabs for 5 days in Asses Milk, and eating the Crabs for 5 days: Such a Period seven times performed makes the *Cancers* very mild, so that afterwards they may be cured by the use of simple Epithemes.

Ætius.

2. This is an approved Unguent in an exulcerated *Cancer*; Take of Oil of Roles, of unripe Olives, each half a pound, Goat's and Calf's Suet, Ointment of Roles, *Ungu. Popul.* each 2 ounces and an half, Juice of Nightshade, Plantain, orrel, each one ounce and an half, Pomegranate-wine 2 ounces and an half. Boil them on a gentle fire to the consumption of the Juices. Strain them. Put to them of Cerus 2 drachms and an half, Litharge 5 drachms, burnt Lead, Antimony, each 10 drachms, Tutty 1 ounce and an half, white Wax what is sufficient. Make a soft Ointment.

Arcaus.

3. *Oleum Saturni* excels all other things, it takes off the malignity of the *Cancer*, assuages pain, and often cicatrizes exulcerate *Cancers*.

Mania

Mania, or, Madnefs.

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I. Like as experience hath taught; that other Diseases, bred of some malignant matter, are sometimes cured by many Evacuations, as the French Pox; so I have often seen Empiricks cure several of Madnefs proceeding from a malignant matter, by very great and frequent Evacuations, such namely as had been left off by other Physicians; and I have oft experienced the same my self. Bleeding, seeing it may evacuate not onely the blood, but together with it the matter of the Disease lurking in the Veins, will be the chief and principal Remedy in Melancholy and Madnefs. Which though I know many have not taught, yea, that some have disallowed; yet I have known by long observation, that innumerable have been cured this way by those who have profest the Cure of these Diseases: who, by opening Veins twenty times, yea, sixty times, have so recovered those that were quite mad, or melancholick, that they have since then liv'd now a long time very well compos'd: And they used not to be solicitous in chusing a certain Vein, but they open'd this or that in the Arm or Foot, and sometime elsewhere, indifferently. Which kind of Remedy neither ought we to neglect, though we should use it with greater prudence.

II. We must come to the more generous Purgatives, especially to the more frequent use of black Hellebore, yea, even of white, yet not in substance, but in infusion made with Wine: yet so, that a drachm of the root of white Hellebore be onely infused for the first time in white Wine without boiling; the second time boil it, but onely gently; then boil it more strongly, and strain it hard; and so proceed by degrees to the strongest Medicines: for in this Cure we must persist a good while; and that the humours may be brought forth the more easily without danger of suffocation, they are to be soften'd and attenuated by bathing the whole body in sweet water not too hot, having Mallows, Marshmallows, Chamamel-flowers, Fenugreek-seed, &c. boil'd in it: and after taking the Hellebore he may drink upon it five or six ounces of Barley Ptsan.

III. The Evacuation of the whole body by Mercurial Salivation, though it be quite rejected by many, yet may it be used with benefit for the Cure of Madnefs. Great hope is placed herein, when other things have not succeeded.

IV. Nitre is commended not without reason; for seeing this Malady has its original from the impurity, heat and restlessness of the Spirits, Nitre does not onely clarify all thick Smoak and fumes Flame, but also fixes things that are volatile.

V. I remember Arteriotomy has cured some of their Madnefs, that were kept in our Hospital of the Incubables; among others a young man of Bologn, &c.

VI. In Madnefs and Phrensie actual Cauteries are commended by many both Ancients and Moderns; nor are they afraid of applying them to the coronal Suture; for they are persuaded, that the hot and accended Vapours are dissipated out of the Head by exhalation when the skin of the Crown of the head is burnt. A Mad-man, says *Gordonius*, whilst he kept the Wound of his Head open, was free from his Madnefs; which he fell again into as soon as the Wound was healed up. *Gariopontus* bids us cauterize both sides of the Occiput. *Dodonæus* saw a Mad-man cured by a Cautey applied to the Nape of his Neck. The fiery heat of the Spirits seems to dissuade us from it, as if they would be more kindled thereby; but *Epiph. Ferdinandus* appealing to experience, 'Tis wonderfull, says he, how the Brain is cooled, and foul and dark Vapours dissipated by it. ¶ That which I have found to profit greatly; are Issues: for if an Issue be made, and be kept open, either in the Nape of the Neck, or upon the Coronal Suture, 'tis certainly very profitable, because not onely black and hot Vapours are dissipated and brought forth by those holes, but it also cools, and consequently, that black and adust humour is emptied. But not onely does an Issue or two in the Head help; but if some be made in both Arms and both Legs also, they relieve wonderfully. And I know that a young Nobleman here at Padua being mad, after infinite other Remedies, was at last restored to his right mind by four Issues in his Arms and Legs.

VII. The last refuge in this Disease is to apply a Potential Cautey betwixt the Coronal and Sagittal Suture, which is let alone till it have so far eroded as that the Bone is laid bare: then let the Skull be opened with a Trepan, and let the place remain open for a month.

VIII. I have seen a Mountebank, who at the middle of the Coronal and Sagittal Suture scrap'd off the Skin with a Penknife till the Bone was laid bare, and by keeping the Ulcer long open cured some.

IX. A Youth being mad, after the use of the most powerfull Remedies, as Antimony, Arteriotomy and Trepanning, was at last guelt, whereupon his Madnefs ceased, but it degenerated into a Melancholick doating.

X. A Mad woman at Padua, speaking always of Venereal things, being kept in the Hospital and often laid with by the Servants, recovered.

XI. A Patient, thirty four years old, seven or eight years ago became mad, upon a disappointment in Love, where he had conceived an hope of a vast fortune. The first exorbitance was very violent, and lasted for ten months, without any lucid interval, but afterwards, recovering his right mind by degrees, he was married. But before he had been married a year, he relapsed, and has divers times for these six or seven last years returned to his right mind. But it is to be observed, 1. That that Indisposition never lasted less than eight or ten months without any relaxation, notwithstanding all that could be done. 2. That a Person of great fame undertook to cure him, and used Venæsection in the Feet, Arms, Head, even till eighteen times, and bathed him forty times; to say nothing of applications to the *Sinciput*, and Potions: But instead of amending, the Disease seemed to be made worse by these Remedies: His Phrensie was always periodical, and never remitted but by little and little: And the Remission happened rather when nothing was done to him, than when he was toiled with Medicines. Last of all, about four months ago, he relapsed into a delirium in a place about twelve miles distant from Paris; where he was shut up, yea tied with bands. But, notwithstanding all the care, he one time got loose and escaped, being quite naked, and ran directly to Paris on a dark night. D. Montmorius, being moved with Pity, resolved to

Rolf. merk.
p. 413.

Mercurial.
A. 1. c. 16.

Hartman.
Pr. Chym.
c. 3. l. 2.

Severin.
Med. effe.
p. 84.

Form. ap.
River. obs.
32.

Barthol.
cent. 2. hist.
69.

Platerus,
tom. 1. c. 3.

Sylvat. cent.
a. cor. f. 53.

Rolincius,
conf. 8. l. 2.

Sennertus,
Pr. l. 1. par. 2.
c. 85.

get him into one of the Hospitals, but withall thought of Transfusion, of which some experiments had been already made: But as to the Cure of so great a raving, we did not think our selves sufficiently instructed by experience to dare to promise it; and our conjectures went no farther than to think that perhaps the fresh *Bloud of a Calf* might aswage the heat and ebullition of his *Bloud* if it were mixed with it. Therefore on the nineteenth of December, D. *Emeresius* opened the *crural Artery of a Calf*, and made all the necessary Preparations; and having let ten ounces of *bloud* out of a vein in the right Arm of the Patient, we could transfuse into it no more than about five or six ounces of the *Calf's-bloud*, because his violent posture, and the crowd of Spectatours interrupted us. In the mean while the Patient, as he said, felt a great heat in his Arm and Armpits, and perceiving him going to swoon, we presently stopt the *bloud* that was a flowing in, and closed up the orifice. Yet after two hours he ate his Supper; and though he was dull and sleepy betwixt whiles, yet he past that night over with the usual exorbitances: Yet the next morning we found him less raving, whence we believed, that by repeating the Transfusion there would a greater alteration be made in him: Therefore we prepared our selves to repeat the Transfusion at six a Clock in the evening, in the presence of many skilfull Physicians, *Bourdelot, Lallier, Dodar, de Bourges* and *Vaillant*: But because the man seemed to be very lean, and it was not probable that his *bloud* offended in quantity, after having spent three or four days without sleep or refreshment, in the cold, running naked about the Streets, we onely took two or three ounces of *bloud* from him at this time; and after we had placed him in a convenient posture, we performed this second Transfusion in his left Arm more plentifully than we had done before: for, considering the *bloud* that remained in the *Calf* after the operation, the Patient must needs have received more than a pound of *bloud*. As this second Transfusion was larger, so were its effects quicker and more considerable. As soon as the *bloud* entred into his Veins, he felt the same heat all along his Arm and in his Armpits which he had done before: His Pulse was forthwith raised, and a while after we observed a great Sweat sprinkled all over his face. His Pulse at this moment was very much altered; and he complained of a great Pain and Illness at his Stomach, and that he should be presently choaked, unless we would let him go. The Pipe whereby the *bloud* was derived into his Veins, was presently drawn out, and while we were busied in doing up the wound, he vomited up what he had eat before, and besides, both piss and stur: By and by he was laid in his bed, and after he had for two hours sustained much violence, vomiting up divers liquours which had disturbed his Stomach, he fell into a profound Sleep about ten a clock, and slept all that night without intermission till eight a clock the next day, being Thursday. When he awaked he seem'd wonderfully compos'd and in his right mind, expressing the Pain and universal weariness that he felt in all his members. He piss'd a large glass full of such black Urine, that you would have said it had been mixt with Soot: He was sleepy all that day, spake little, and desired that he might be suffered to be quiet: He also slept well all the next night. Making water on Friday morning, he fill'd another glass with Urine that was altogether as black as that he made the morning before. He bled a pretty deal at the Nose, and therefore we thought it convenient to take from him two or three Porringers of *bloud*. In the mean time, his Wife, who had sought him from one City to another, came to Paris; and he, as soon as he saw her, rejoiced greatly, and related to her with great constancy of mind several chances that had befallen him as he wandered about the Streets, &c. He is now of a very

quiet spirit, minds his business very well, sleeps long without interruption, though, he says, he has sometimes confused and troublesome Dreams. This Story is taken out of an Epistle of *J. Denys*, Doctour of Physick and Professour of Philosophy and Mathematicks at Paris, concerning Transfusion of *bloud*, and insufory Chirurgery.

XII. Let *Laudanum* be given to the Mad to procure Sleep, temper the Brain, and hinder the ascent of smoaky Exhalations. But because such Patients do commonly refuse Medicines, and 'tis very hard to get them to swallow a solid Pill, the *Laudanum* may be dissolved in any convenient Liquour.

XIII. I think it is not inconvenient to use a pretty gross and plentiful Diet; for to those whose faculty is strong with defect of humours, *Galen*, (1. *Apb.* 17.) bids us allow Victuals plentifully and often. Nor is it inconvenient that somewhat remain crude and phlegmatick; yea, 'tis profitable on the account of moistning and cooling: For persons in this condition are seldom indeed recovered, for this reason, because generally they eat far less than is convenient: nay, 'tis sometimes necessary to use both fair and foul means to compell them to eat their Victuals.

Theod. de
Mayerne,
Trad. de
Laudano,
MS.

Mercat. l. 1.
Prax. c. 18.

Melancholy.

(See *Hypochondriacal Affection*, Book VII.)

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I. THERE is no greater reason for Fear in any thing of Physick, than to take either more or less *Bloud* from the Melancholick than is fitting. For in these we should be afraid of this Remedy, because of their Fear and Sadness, where-with they are always necessarily affected through the dissipation, suffocation or diminution of the vital

tal spirits which the melancholick have so great need of: and moreover, in Bleeding, commonly that which is more thick is retained within, whilst the more subtle and profitable part of the blood is evacuated. Nor do we (as many advise) approve of permitting the blood to flow freely if it look thick when the Vein is opened; and to stop it, if it look thin: For it is better to weigh by an exact and more certain conjecture, whether blood is to be let or no: For oft when the effervescence of the blood has been let alone and no blood let, the Distemper has degenerated from Melancholy into Madness. Wherefore we must consider in this business whether the Liver being too hot and dry, breed too much of this humour; or, when a great deal of blood is bred, it burn it up through its own hot Intemperature, or that of the whole body, from an internal or external occasion; or, whether the blood of the Hemorrhoids, Terms, or Varices be supprest; Then truly blood is to be let presently, yet not in that quantity we would suffer it to flow in, if there were a redundancy of blood with the other humours: Something is to be allowed to the Disease of Melancholy, which for the aforesaid reasons does not admit of it. But when either the affections of the mind, or famine, care, want of sleep, love and such like induce a Melancholy, the nature of the thing advises us to abstain wholly from Bleeding; especially if we understand that long evacuations either of the blood or of the belly have preceded: the rather, if the body look lean, shrivell'd, withered, be wasted with cares, and be of a black colour: or if you find that there is a great deal of an adust, thick, cold and dry humour, but not much blood: upon the account of all which things, I think it was said by the Ancients, that Bleeding does the Melancholick little good.

II. In Bleeding we must give diligent heed that the thicker blood be not left within, and the thin and profitable drawn forth. *Galen* indeed advises us, that if the blood which flows out be not melancholick, it is presently to be stoppt; but others tell us it often happens, that though the blood be thin at first, yet that which is thick follows afterwards.

III. It is an error, not onely of the vulgar, but also of some Physicians, that the Hemorrhoids always benefit the Melancholick. There are many Hypochondriacal Melancholicks, and of other sorts, to whom the opening of the Hemorrhoid Veins is preferred amongst the chief Remedies, as if those Veins evacuated a thicker blood than other Veins, which I think to be very absurd: The Authority of the Ancients and Moderns, and mine own experience persuade me to this opinion. Amongst the most ancient *Hippocrates* (6. Epid. sect. 3.) thought that the opening of the Hemorrhoids (not by Leeches or otherwise, which few have consider'd, but) by Nature her self is very profitable for preventing and curing very many Diseases bred of thin blood, as the Pleurisie, Peripneumony, Phagedæna (or fretting Ulcer) Biles, Leprosie and other such like. Yet it is not to be denied, that the same profit those mad Melancholicks that labour under black Choler, according to *Hippocrates's* opinion, *Aphor. 11. sect. 6.* The Hemorrhoids supervening, says he, are profitable to those who are troubled with Melancholy and the Stone: He speaks not a word of provoking them, but onely approves of them, if Nature unlock them of her own accord. Now they flow not onely from a melancholick blood, but also from any other: for Nature oft makes use of this flux to purge the blood, if there be any thing faulty in it, or if its quantity exceed, as in the too great abundance of blood in women with child, or such whose Terms are stoppt, and in the maimed, whence blood flows plentifully by them. Hence *Actuarius*, m. m. cap. 20. observes, that besides from melancholick blood these Veins are opened in

those who intermit their usual exercises, that use too full a Diet; whose accustomed evacuations from other parts, as the Nose or Womb, are stoppt; or who have used to be let blood. Later Anatomists have observed that the Hemorrhoids are twofold, some spring from the *Vena cava*, and others from the *Vena portæ*; that those evacuate a more thin and pure blood, and these a thicker. But this they do not doe always, for a blood that is pretty pure is sometimes evacuated by these latter, and a thicker by the former. Wherefore unless Nature shew that she attempts that evacuation, these Veins are not to be rashly opened, and if a pure and sparkling blood come forth, they are to be stoppt presently, for the Melancholick are worse by their evacuation. When any opens them, he cannot promise himself for certain that a melancholick blood onely shall be emptied, and not that which is pure and sparkling. But if any have been accusom'd to them, and be upon the suppression of them become melancholick, mad, nephritical, or epileptical, it will not be unprofitable to open them again, that the humour which has its reflux towards the upper parts, may be more safely poured forth by the accustomed ways, whose passages are stoppt up. But if Nature do not affect this way, we ought not to make a custome of it; as *Galen* teaches, 4. Aph. 25. That we should not accustome our selves to that evacuation that is made by the Hemorrhoids; and *Hollerius* does rightly deny the opening of them, if they do not swell and have never flow'd before: But if Nature incline that way, in imitation of her, we may open them, otherwise by no means. For though Nature do sometimes profitably evacuate blood by the Hemorrhoids, yet we may not always imitate her; as in Fevers, she sometimes carries off the Disease by Bleeding at the Nose, or by Sweat, but who will dare to open the Veins of the Nostrils, or to provoke Sweat, before signs of concoction, or before Nature have shewn her inclination? The same we must think of the Hemorrhoids. Yet these things are not to be understood of particular Diseases, for in them particular Veins may be opened; thus we profitably procure Bleeding at the Nose in a Phrensie, or Head-ach, because these Veins communicate with the part affected: Thus in the Nephritical and Splenical the Veins of the *anus* may be opened, but never in other Diseases that are more universal, unless Nature follow this motion.

IV. As to Purgers, there is (says *Crato) in Hellebore a certain poisonous driness and moisture to be corrected, of which correction I might say many things, unless I remembered that of *Mesue*, That it is a degree of wisdom not to come to strong Medicines save when weak have not benefited. And although I know that almost all Practitioners do advise to give the strongest Medicines; yet I am persuaded by *Mesue*, that a weak Medicine often repeated does the same thing (and with less danger) as a strong does at once and together; and I have learnt this to be true by the experience of many years. I say nothing of how many and whom I have cured, that have been ill of this Disease, though I could do this truly; but I can truly affirm, that I never us'd *Lapis Lazuli*, or Scammoniates. I know that *Senna* is not onely safe, but moreover inoffensive to the Stomach and gratefull to the Heart: Let the Practitioner use it as I have done in melancholick Diseases. Thus far *Crato*. ¶ White Hellebore is celebrated by all Writers in Physick for melancholick and maniack Diseases: But 'tis better so to prepare it, that it may work by stool, than that it should work by vomit: The manner of its preparation is this: Boil it in Balm-water to the consumption of half; and in the strained decoction boil some Prunes, then with some *Cassia* newly drawn pass it through a Sieve, and with Cinnamon and Sugar make an Electuary: Or let its root be infused in the Pulp of Quinces, and then taking away the root give

give the Quince. Or infuse it in *Mesue's* decoction of *Epithymum*, which give with the compound Syrup of *Polypody*. But before the giving of it the humours are to be prepared for three days by Attenuaters and Incisers, and the body is to be moistened with Meats of good juice in plenty, by sleep, rest and anointing the Body all over, and the Belly is to be loosed by Clysters of Oil, or of Milk and Butter. See *Sect. 11. of Mania*.

V. Of Pills we must chuse those which evacuate gently and without trouble, and not those which evacuate strongly: Yet potions are to be preferred, as drying less than Pills: for Pills evacuate much and strongly, and dry the body beyond measure, by which drying the Patient is made worse.

Rondelet.
c. de Melan.

VI. Melancholy in this place signifies not an humour, but a Disease caused by the melancholick humour, because many think this humour alone to be the cause thereof, and direct all their Remedies to this alone: But many things shew that it is not always caused by this humour and by vapours therefrom. For we often see that those who labour under this symptome, have no signs of this humour abounding; yea, that persons of any temper may sometimes be thus affected, from the *intemperies* alone either of the Brain or Spirits. *Hippocrates*, when he reckons up the signs, mentions only Fear and Sadness. *Matthews*, *comm. in 9. Almanf.* by the authority of *Rhasis*, will have strong and long cogitations to bring on this Passion, without changing of the complexion really; and that men become sad when they cannot obtain the effect of things they think of. We often see how fruitlessly Physicians torture such Melancholicks with Purgings and divers other Remedies, who are cured presently after, only by the change of their imagination. One that believed he wanted an Head, was cured by only putting a leaden Cap on his Head, without any purging, alteration, &c. which could not have been, if that clammy and stubborn humour had been present. We meet with many such Stories, whence 'tis clear that such imagining persons are not always to be troubled with Medicines which bring hurt to the body, and no relief to the mind: for the cause lies not always in the humours, but in an *intemperies* alone, or also in the Spirits, which being either quieted, or sent off far from the Heart and Brain, the malady ceases, and joy succeeds sadness; for nothing can obey such motions but the Spirits: An *intemperies* cannot pass off, nor so stubborn an humour be evacuated and lose the destruciveness of its nature so suddenly, especially in a malady that is confirm'd by a long tract of time. Hence *Rhasis*, *1. contin.* says, *That sometimes there is a Melancholy when the humours are good, and he that has this disposition needs not any Medicine; and this is, when any thinks of some fact with great eagerness, and is cur'd by only changing his imagination, either by words or some other device.* *Avicen* also confesses that it may be caused by an *intemperies* without matter. But besides, there is another species of Melancholy, that depends not at all on an humour, viz. that which is caused by Love, to which men of all temperatures are subject, especially the sanguine, and such whose testicles have a hot *intemperies*; the Melancholick are not so often nor so strongly affected in such cases. That this is not caused by any humour, as it is an humour, appears from hence, that it spares no humour, and may be, what humour soever prevail; and besides, it invades those who are of a good constitution of humours, what such soever those be, only from the apprehension of a lovely object; and seldom invades those who labour under a putrefaction or corruption of humours; but such as are otherwise healthfull, and can be cured neither by Hellebore nor other Evacuations. If a Disease at length succeed such a long imagination, the Madness preceded the Disease, and this depends on that, and not that upon this.

Primros.
civ. viij.
l. 2. c. 25.

VII. Because Melancholicks are constant onely in inconstancy, they are apt to refuse Medicines, in which case I recommend the Flowers of Antimony, reputed by *Fonseca* a specifick Remedy of Melancholy, and oft experienced by my self also so to be, given to fifteen grains at the least: or half a glass of thin White-wine in which six grains of the glass of Antimony have been infused for a night, that at length we may come to the use of Hellebore.

VIII. Before the giving of Hellebore the body is to be sufficiently moistened, drinking every morning for a week a pint and an half of clarified Whey with the Juice of Borage; or distill'd Whey with an Emulsion of Melon-seeds: The Hellebore is to be given in the form of an Extract, beginning with half a drachm, with a little *Cassa*, and after an hour giving a good quantity of prepared Whey, especially when the Hellebore is biting.

Idem.

IX. Of what avail the Extract of *Coloquintida* is in Melancholy, is shewn by the example of a Maid that was ill of a dumpish Melancholy for almost a whole year, and afterwards, upon my giving of her Extract. *diacolocynth.* dissolved in a decoction of Prunes, returned to a sound mind beyond all hope and expectation. It expelled the morbid matter by stool in great plenty with rumblings, and the stools were all mucous and phlegmatick, and so slimy and viscid, that they would hang together like a Rope. After she was come a little to her self, she thought that all her body was full of a black and melancholick humour, and therefore she diligently viewed her excrements, amongst which I got some writing Ink to be poured. Another woman that was of a melancholick constitution, and barren, being afflicted with melancholick Passions, expecting now and then the Heads-men and Executioners, was cured by me at length with giving her the Extract of *Trochisc.* *Albandal*, and by a good wile. ¶ I obtained the same effect by an infusion onely of *Senna* with *Tartar*, in the water of *Balm*, *Borage*, &c. given for three days without the addition of any other Purger. The Noble young Gentleman, *Bernard*, of the Illustrious Family of *Wattenville*, labour'd under a great Melancholy, both essential and hypochondriacal; He had addicted himself to the Study of Physick, and had taken very many Remedies: Upon the use of a laxative Pilsan he voided such stinking, thick, tough, black stuff, that being fully persuaded that he had expelled pieces of his Guts, he got me to be call'd; yea, a Minister also that might take Care of his Soul. I bad him be of good cheer, and shewed the conquest of the Disease, demonstrating to him, that that filthy stuff was expelled out of the Mesaraick vessels, Spleen and neighbouring vessels, and that the *Viscera* and Guts were not violated at all. Being settled in his mind and merry, after four days (in the year 1658.) he returned into his own Countrey, and by Letter certified me of his firm health, returning me thanks.

Ch. Garman.
misc. cur.
ann. 1672.
obs. 202.

X. Purging, inasmuch as it withdraws the Fuel of the Disease from the first ways, and removes the Impediments of other Medicines, ought to be made use of at the beginning, and to be repeated betwixt whiles. But whereas some think that for the quicker rooting out the Disease, Hellebore and *Elaterium* are chiefly to be used, and alledge the authority of *Hippocrates*, we shall find, if we mind the success, that these are not so generally convenient, but that they do often hurt those that take them very much: For strong Purgers do in no wise take away the cause of the Disease, viz. the Dyscrasie of the blood, but rather increase it: And moreover they do farther weaken and cast down the animal Spirits that are already dejected. But Hellebore is therefore prescribed so often by *Hippocrates*, because in his time there were hardly any other Purgers known, at least they were not in frequent use. But now 'tis much better to drain the receptacles

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tacles of the humours, by gentler and milder Medicines, and to cleanse only the bowels and first ways without great commotions of the blood and spirits.

Willis.

XI. As to *Confectio Hamech*, it is disapproved by some Physicians: *Solenander* says, (*sect. 5. conf. 22.*) that *Hamech* has made a wonderfull hodge-podge in his Confection, and has boild those things which are not to be boiled, and hath confounded together things very much unlike, and at length hath made an horrid Confection without any Art of Physicians, such as can be gratefull to none: I say nothing of the acrimonious Medicines, as *Scammony* and *Coloquintida*, that are put in it. *Rondeletius* is of the same opinion, who says, that it is only good against the naughty Ichors of the humours. *Fernelius* disapproves of it also. And in truth it seems to be no well composed Confection, especially for the great quantity of *Myrobalans* that is in it, which bind: For though the *Arabians* used them frequently; yet, they had them fresh, which we have not: and if any have a mind to use them, they are much fitter for naughty Ichors, Itch, and the like cutaneous Diseases, than for Melancholy.

Sennertus.

XII. Also because the melancholick humour uses to be moved towards evening, it seems convenient to give Purgers about four a clock in the afternoon, onely those that are gentle, and to continue them for some days: But Preparers may be given in the morning.

Idem.

XIII. *Cassa* has the preheminece in hypochondriack Melancholy from adust Choler: For *Cassa* does not (as most think) therefore loosen the Belly because it is slippery and soft, but because it is indued with a peculiar purgative virtue, whereby it brings forth both Choler, Melancholy and thick Phlegm, not onely out of the Intestines and first Veins, but also very plentifully out of the whole lower belly, especially when the belly has been first prepared by Baths: Wherefore let Atrabiliary Melancholists use it frequently, either alone, or mixt with Rhubarb; for 'tis very profitable for all Melancholists, because it moistens and cools the Bowels, and asswageth the fierceness of black Choler. If it do not purge effectually drink after it a little of the Decoction of the Leaves of *Senna*.

Enchirid.
Med. Pract.

XIV. Whence soever the Disease have drawn its first original, we must first note, That the whole body ought to be freed from the melancholick humour, and from all the filth of other humours. Secondly, That the chief Cure be always directed to the Hypochondres, seeing the first generation of the melancholick humour is in the Liver and Spleen, and the collection thereof uses to be in all the region of the Hypochondres: Therefore the Cure of the hypochondriack affection may suffice for the Cure of the other species of Melancholy.

Riverius,
l. 1. c. 14.

XV. Though a melancholick *Delirium* never happen but when the Brain is primarily affected; yet, seeing 'tis always joined with some affection of the mind, and the affections of the mind very much alter and affect the heart, it can hardly be that that should not be withall affected; therefore in the Cure we must also have respect to the Heart: especially because if the vital Spirit be impure and dark, this fault is communicated to the animal Spirits and Brain.

Sennertus.

XVI. There is nothing which is better for the concocting and preparing of the melancholick humour, than moist things: For its driness is the cause why it resisteth the Cure, and does not easily yield to Medicines. Wine, unless it affected the Head, and were a little of the hottest, were most convenient for concocting, maturing and preparing the melancholick humour; wherefore 'tis good to make use of it in all melancholick Diseases wherein the Head is not affected. ¶ Melancholists are rather to be moistned with Meats and Baths; or Potions and irrigations, than their bodies to be heated and

Rondeletius, cap. de
Melanch.

dried with laxative Medicines. *Galen* writes (*3. de loc. affect. c. ult.*) that he cured a melancholick person with the use of a Bath of sweet water and a moist Diet. If the Disease proceed from *intemperies*, a long moistning cures and conquers it: if from an humour, it prepares the matter for evacuation: for 'tis the driness alone which makes dry Diseases hard to cure: For such Patients are then cured when they wax fat, which is a certain sign of moistning. Wherefore we must endeavour to moisten all the body by Baths, especially if the Disease arise from the whole body: but if the head be onely in fault, then is the head onely to be moistned, &c.

Idem.

XVII. The Mineral Waters that are impregnated by Iron, use to contribute much to the Cure of the Melancholick, inasmuch namely as being drunk plentifully, they wash away the Salino-sulphureous tincture of the blood, and destroy its evil ferments. Moreover, they cleanse away the filth from the *Viscera*, open obstructions, and, which is of great benefit, by their attraction they both strengthen the weak and over loose *Viscera*, and also shut the mouths of the Vessels that gape into the Brain, so that there is no passage into it granted to any preternatural matter along with the nervous juice. And for this reason, namely, for strengthening the *viscera*, and shutting the passages into the Brain; the Vitriolick preparations of Iron use to doe good in Melancholy, and also in the *Vertigo*.

Willis.

XVIII. Those things being premised that ought to be, in a Melancholy from an adust humour with obstructions of the *Viscera*, we must come to the use of Asses Milk, yet with Sugar, that it may soften the more stubborn dried obstructions, and temper the heat of the Liver and Veins without injuring the Brain, because of its short stay in the stomach, as being of a very thin substance, not buttery, nor very cheefie. ¶ The most excellent and experienced *Wesper* uses not onely Asses Milk, but also Goat's and Cow's, with benefit.

Fortis, conf.
24. cent. 1.

XIX. Vomitories (as in most Cephalick Diseases that want a Fever) are wont to help in a peculiar sort in all kinds of Madness. The reason hereof consists partly in this, that the viscous stuff that loads the Stomach, and very much dulls the mind, being evacuated, the Spirits becoming thereby freer, do expand themselves more briskly and cheerfully: and besides, Vomiting, inasmuch as it compresses and empties the neighbouring receptacles of the humours, namely, the Gall-bladder, the duct of the *Pancreas* and the Glands of the Mesentery, hinders their Contents from being translated to the Head.

Willis.

XX. I esteem that Preparation of Steel the most profitable and safe, which is made with the Acid of Sulphur, and is commonly called *Crocus Martis aperitivus*; It is to be given to three grains with half a drachm of *Pil. de tribus* with Rhubarb, an hour after which let the Patient drink a pint of Barley-water or of clarified Goat's whey: Nor need we fear *flatus*, seeing they are hot and dry, and not cold and moist, as is commonly believed. Continue in the use hereof for twelve days.

Fortis, conf.
23. cent. 3.

XXI. We must not use Catharticks continually, nor too often, but 'tis sufficient to give them once in six or seven days; and at other times, if the Patient be costive, let him take Clysters. As to other Medicines which are not evacuating, though the Ancients laid but little, yet we lay the greatest stress of the Cure upon them. They (with whom many Moderns also consent) ordered nothing more to be done for the Cure of Melancholy, but to purge off the Melancholick humour: Wherefore, esteeming Purging to be of the greatest moment, they prescribe other Physick onely for the sake of this, calling all the rest Preparatory: with the intention, namely, that as soon as the humour was reduced to a fit consistence by altering Medicines, and the ways

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were open enough for its evacuation, it might at length be expelled by Purgers. Which kind of Hypothesis seems incongruous both to reason and medical experience, namely, because the Melancholick receive rather hurt than benefit from frequent Purgings, though made use of never so methodically. We therefore, placing the Cause of this Disease in the Disorders of the blood and spirits, and in the weakness or bad conformation of the *Viscera* and Brain, esteem Alteratives and Corroboratives for the Remedies of the first rank, and onely for the sake of these do sometimes intermix Catharticks. Purgings therefore being prescribed rightly and with due intervals for the removing of impediments, proceed to Alteratives and Corroboratives in divers forms: As for example: Take of the Conserve of the flowers of the Gilli-flower call'd *Tunica*, and of Borage, of each two ounces and an half; of the candied rinds of Myrobalans six drachms, of Coral and Pearl prepared of each a drachm and half, of Ivory and Crabs-eyes of each a drachm, of *Confectio de hyacinth*, two drachms, of the Syrup of Corals or red Popies, as much as suffices to make an Electuary. The Dose is two drachms morning and evening, drinking some Cordial Julep after it.

Willis.

XXII. Amongst Corroboratives, *Confectio Alkermes* is of great efficacy, as exhilarating, and resisting fear and sadness, if it be rightly prepared. And the *Lapis Lazuli*, which some think should be omitted in this confection, has not onely a virtue to purge, as *Avicen* witnesses, but also to separate melancholick vapours from the blood.

Sennertus.

XXIII. A Nun of thirty years old, having the courage and voice of a Man, thick and black Hair, and a ruddy colour in her Cheeks, having labour'd under great and oft returning Pains in her Head; fell afterwards into a continual Melancholy. The ordinary Remedies not prevailing, making an incision in the Temple artery, I drew half a pound of blood: And, which was wonderfull, all things were presently allayed, and she quite recovered: The estuating distemper of her Brain was cured by this Remedy, even as a Coal is quenched by throwing water on it.

Severinus,
Med. Eff.
p. 46.

XXIV. Issues are profitable to those who are of a melancholick habit, because, as *Hippocrates* affirms, they have very ichorous blood. ¶ Issues are commended, but in that Melancholy which is with matter; but let them be made in the lower parts, in the Thighs or Hips. ¶ In hypochondriacal Melancholy we use to make Issues in the Legs or Thighs, which I have known doe a great deal of good.

Claudin.
resp. 43.Saxonia,
l. 1. c. 16.Mercurialis,
lib. 1. c. 50.

XXV. Some commend an Issue made upon the concurrence of the sagittal and coronal Suture: I think some impure vapours may exhale through such an ulcerous hole; but am of opinion that many inconveniences happen thereby: for, besides that vapours are drawn from the lower parts to a noble part, an abscess is made above the Disease: whereas *Hippocrates* writes, that Abscesses, which are as it were the Outlets of Nature, onely help then, when they are below the Disease, and very far from the Belly, or very remote from the Disease.

Rohfinc. 1. 2.
conf. 6.

XXVI. In the first Preparation of the humours some Cream of Tartar may be added to decoctions and distilled waters; for by a certain sympathy it moves, ferments and draws acid humours to it self, whence Chymists call adust Melancholy, Tartar. The second Preparation is better performed by clarified Juices than by sugared Syrups; for these latter excite heat, as being sweet, and puff up the *Viscera*.

Fortis, con-
sult. 23. cent.
1.

XXVII. Whether must the Melancholick use *Veneris*? distinguish thus: If any become such by the retention of corrupt seed, whether he be hypochondriacal or not, and be not yet essentially weak, he will doubtless be relieved by using of it: for Evacuation cures Diseases proceeding from Repletion,

when such things are expelled as are fitting, that is, the proper matter and cause of every Disease. But as to others it is unprofitable and hurtfull, by cooling, drying and exhausting of the Spirits: If it doe good, that happens from the resolution of some *flatus*, and from being cheered by it, but then it must not be too frequent, nor the party very weak.

XXVIII. A Professour of *Padua* being almost wasted off his Legs by long courses of Physick every year without any benefit, at length taking up new resolutions, drove away the Disease by taking a meal of Succory pottage for the first course every meal.

Rhod. obs. 4.
cent. 1.

XXIX. We strictly admonish, not to disturb and provoke these Persons: For those are madder than the Patient, who, when they seem to be plac'd in authority, use it unseasonably; who fright him that is already frightened, and do stubbornly and frowardly endeavour to withdraw from stubbornness and frowardness which are the beginning of the Disease: for they are not to be cast down, but to be cheered up. ¶ Sometimes we must indulge them something, especially when we know that their fancy is bent upon this or that: for, as the imagination commands the humours and spirits; so it may be that by the means thereof the innate heat may be excited, and sometimes of its own accord vanquish the morbidick

Crato apud
Scholtz.
conf. 174.

cause.

J. Horst. De.
cad. probl.
10.

XXX. This is to be noted, from *Aetius*, that we must sometimes, for some while, abstain from all Physick, and that some rest is to be granted to Nature, which having been afflicted with continual Remedies, is recreated when she is let alone, and more strongly sets upon and conquers the Disease.

XXXI. A young Man, of thirty years of age, was ill of a very stubborn Melancholy: The Skull being carefully opened by *J. Cass. Placentinus*, though there was no suspicion of pus lying upon the membrane, he was recovered by the eventilation of his Brain. ¶ The *Terebration*, or Boring through of the Brain, is the last Remedy, the safest and most profitable of all: For if superficial Ulcers arising in the Head have cured the Melancholick, as *Hollerius*, and others testify; how much greater benefit may we believe that Ulcer will bring which penetrates the Skull? Yet that perforation shall suffice me which reaches to the marrow or middle, with the removing of the outer *Lamina* of the Skull, without hurting the *Dura mater*, lest the Brain be too much cooled: and this shall be done by making a Caute-ry near the coronal Suture with a red hot and sharp Iron, penetrating even to the marrow, (or to betwixt the *Lamina*) rather than by true *Terebration*: I say near the Suture, to avoid hurting the Membrane which passes out by the Sutures: If this be done, and be kept open with a pellet, it may benefit very much. See Examples in *Rohfinc. meth. spec. p. 413.*

Rhod. obs.
43. cent. 1.Sylvaticus;
cent. 1. conf.
58.

The Weakness of the Memory and Mind.

The Contents.

The Memory is not always to be restored by heating Medicines. I.

The Abuse of *Confectio Anacardina* & *Aqua magnanimitatis*. II.

Where Issues are to be made? III.

Their Efficacy. IV.

Treacle and Mithridate ought to be rejected in Weakness of Mind. V.

I. I Can hardly consent to *Galen's* opinion, that Forgetfulness depends on a cold Intemperature, because I know several that have very cold Brains

Brains without impairing of their Memory, which yet ought to follow, if *Galen's* Arguments from the similitude of efficient Causes, and from the similitude of cold Animals, were of any strength. I have seen the contrary in some forgetful persons whose Cure I have undertaken, in whom there was no manifest sign of Cold: In some I discovered a notable Heat of the Brain, whom I helped by the application of cooling Remedies about the coronal Suture. I deny not but there is in many a notable dry Intemperature; but I doubt whether the Memory be either diminished or abolished by this Intemperature alone. Some cases observed by me increate the doubting: I have known some lose their Memory quite by a great blow on the Head: *Galen*, from *Thucydides*, relates, that some who recovered of a Pestilence, forgot all things that were by-past; And what cold Intemperature is to be accused here? I have seen a Woman that forgot all things, who by a spontaneous looseness, by which she evacuated cholerick, bloody, green, mucous and the like stuff, recover'd her lost Memory, without the application of any particular Medicine to the Brain it self.

II. The pernicious custom both of Physicians and others is to be condemned, who being indued with a weak Memory from their first constitution, endeavour by violent Medicines to recover that which they have not lost. For you may find young Students, not a few, who being desirous of a good Memory, beg both by Intreaty and Money, that *Confectio anacardina* may be given them: Whence not a few either unsettle their Judgment, or better not their Memory at all, or are tormented with great Pains in their Head. For who knows not, that if we would change the natural temper of the Brain, or any part, into a better, we must act leisurely, and by degrees, not with vehement and the most effectual Remedies, as those are which are made of *Anacardum*? which finding in the Heads and Bodies of young men nothing that is preternaturally thick, cold and moist, do waste and weaken the natural temper and substance, whence proceed a thousand kinds of harms, and the Memory perhaps becomes worse. Such things help those indeed whose Memories are hurt, if they were good before by their natural constitution. ¶ It is called *Confectio Sapientum*: Yet it is to be given warily, especially in those that are well, for strengthening their Memory: whence some give half a drachm or less of it in hot water, that its too much drying may be remitted: But those who have their principal members hot are by no means to use it: For even Experience has taught this, that some have indeed acquired to themselves an admirable Memory by this confecti- on, but have not been very lively, and have died in the very flower of their age, by having their body too much dried. ¶ In both confirming and restoring the Memory *Aqua magnanimitatis* is of wonderfull virtue (which see in *Schroder's Pharmac. lib. 2. cap. 38.* and *Hofman. in clavi, p. 50.*) 'Twill be more powerfull, if the *Species anacardina* be extracted with it; from three to six grains of whose essence being given once or twice a week in Wine or Lavender-water, is a singular Remedy. But note that this Water dries very much, and therefore its use in the cholerick and more dry ought to be rare and with caution; so that 'tis rather good for the phlegmatick and melancholick. ¶ See concerning its efficacy, and another preparation of it in *Miscell. curios. ann. 3. vir. 1672. p. 605.* from *Wedelius*, where there is most excellent Counsel for an impaired Memory.

III. Issues help in these cases; because when humours abound in the Brain, it helps if they be evacuated by little and little and turned aside from the Brain. But note, that as I commend an Issue in the *Armes*, so I condemn it in the *Occiput*, because that place is the Seat of the Memory, and 'tis pernicious to evacuate the whole body by the part affected.

IV. I am wont to make Issues in the Head with very good success when the Memory is lost, and Ratiocination impaired, especially in case of a cold and moist Intemperature; but the body must be first well purged. They must be made near or upon the Sutures, three or four, or more, as shall seem necessary.

V. Some commend Treacle and Mithridate, which I had rather omit, because of the *Opium* which makes all the Senses stupid or more languishing, though it have been a long time made; I say, 'tis better to let them alone, seeing there want not other things, and no pain or necessity requires them here, nor is there any malignity of humour.

Mensium fluor nimius, or, The too large Flux of the Terms.

The Contents.

Bleeding is very good. I.
We must often purge. II.
When Vomits have place. III.
Diureticks are unfit to make derivation. IV.
Astringents and Incrassates being used long doe harm. V.
Opates are profitable. VI.
Whether Astringents are to be applied. VII.
The Cure of this Flux joined with an hysterical Suffocation. VIII.
Sylvius's Causes and Cure. IX.

I. PHLEBOTOMY for Revulsion is to be celebrated in the *Arme*, ever and anon stopping the orifice a little while with your finger. A good quantity of blood is to be let, as much as the strength can bear. ¶ I have known many who have been cured by being let blood largely, when the flux could be stented by no other Remedies.

II. Some Lenitive Medicine is not inconvenient, which may bring Serosities plentifully out by stool: for, besides that it may make a Diversion, it will cleanse the first ways, and prepare them for the use of Astringents. Let it therefore be either Manna with Syrup of Roses solutive, or *Cassa* with the Powder of yellow Myrobalans and magistery of Mechoacan.

III. In an Hemorrhage of the Womb though *H. Petreus, disert. 47.* and *Lazarus Riverius, lib. 9. Pract. c. 3.* persuades us that Vomitories are very profitable, as being a greatly revelling Medicine; yet in the very Fit we quite reject them: But out of the Fit, if the condition and motion of the humour require it, we admit the use of the same with great caution, as *Galen* advises in *comm. Epid.*

IV. If the too great flux have its rise from a serous, thin and watry blood, that is to be evacuated; for that being evacuated, seeing the blood is made more fluid by it, this stays of its own accord; and this is done very well by Hydragogues, as Mechoacan and Rheubarb, and by Sudorificks. Some think, that in this case derivation may be made to the passages of Urine by Diureticks; But Diureticks do not derive the blood it self. For though they may derive thin humours, mixt with the blood, to the Urinary passages; yet there is fear left by fusing the blood, they make it more fluxile, and increate its violent motion to the Womb.

V. When the disease is inveterate, things that astringe, and incrassate much, are not to be used long, for there is danger lest they stuff up, close and constringe the passages, and so breed obstructions, and doe great harm to the principal bowels (which are wont to receive notable prejudice in this disease:) But 'tis much better to insist upon strengtheners of the Liver, which bind indeed, yet so moderately, that they can doe no harm thereby.

VI. Opiate Medicines are profitable: For like as when Nature is provoked by too strong Purgers,

Epiph. Ferdinandus, lib. 47.

Platerus.

Riverius, l. 15. c. 3.
Holler. aph. 50. 5.

Fortis.

Frid. H. f. man. m. m. l. 1. c. 9.

Sennertus, cap. prop.

Laz. River. l. 15. c. 3.

Petr. Salv. Div. Annot. in Altimar. c. 1.

Mercatus, Pract. l. 1. c. 19.

Sennertus, Pract. l. 1. c. 2. part. 2. c. 5.

Hartman. pract. c. 14. sect. 2.

Mercurialis, l. 1. c. 18.

the expells not onely the excrements of the proper humours, which are drawn by the Medicine, but withall, such as are profitable; so also does it fall out here; Nature indeed begins to expell that which is unprofitable, but through a furious irritation she exceeds in her work of expulsion, so that her natural work becomes symptomatical. In this case 'tis necessary that the depraved motion of Nature be stayed, which after other common Medicines may be done by using Narcoticks. But 'tis to be noted, that we must use Opiates warily, because Womens innate heat being but weak, they are therefore more vehemently affected by Stupefiers. But we doubt not, but in case of necessity, having considered the circumstances well, we may doe more to our desire by three or four grains of *Laudanum* Opiate rightly prepared, than if we fruitlessly repeat even to loathing, those astringent potions which consist of so many Ingredients: And in so great a space of time as is requisite for the taking of so many remedies, How greatly must the strength and spirits be spent? ¶ When the Terms flow excessively, and will be stayed by no other sort of Medicine, we rightly make use of corrected *Opium*; which my Wife experienced six years ago, who by this means was snatched even out of the Jaws of death, the fervour of her blood being reduced to a due temper by the use of *Laudanum*.

Greg. Horst.
de acad. 10.
probl. 2.

Idem. l. 10.
obs. 3.

Merat. de
incusat. med.
l. 1. c. 3.

Rivierus
cent. 1. obs.
94.

H. B. 10.
c. 10.

VII. We must have a care how we use those things that have a compressing virtue: for seeing these do compress the part to which they are applied, they will necessarily repel in the affected and flowing womb the humours that are staying there, and by consequence will increase the fluxion.

VIII. A Wench had her Terms flow so very plentifully, that she evacuated four or five pounds of blood in two hours time, whereby she was so greatly affected, that she lay speechless and dead as it were, yet having her eyes open, and signifying by her hand, that she was strangled: But she was cured of all by this potion: Take of the Waters of Orange-flower, Roses and Plantain of each an ounce, of *Sang. draconis* twelve grains, of *Sal. prunelle* one drachm: mix them, and make a potion. This was repeated after three hours, she having taken some Cruel in the mean time. Upon the first dose all the Symptoms remitted, and after the second they all ceased.

IX. The Terms continue to flow longer than usual, First, through the abounding of a laudable blood, and the straitness of the vessels. Secondly, through the too great fluidity and serosity of the same, and also the straitness of the vessels. Thirdly, through the passages of the womb being too open, and not contracting and straitning themselves again soon enough, and so through the womb's being weak. Fourthly, Through some great affection of the Mind, Anger, Fear. Fifthly, Through the heat of the Air, especially when joined with moisture. Sixthly, Through the too great motion and wearying of the body, as also want of sleep joined therewith. Seventhly, Through eating and drinking too Aromatick things, or abusing Medicines that too powerfully provoke the Terms.

1. When the blood abounds too much in the body, and the vessels are strait, if there insue no notable detriment to health, the Flux is not then to be esteemed preternatural, though it be somewhat troublesome to Women, but they must bear it patiently, for if they should endeavour a change, there is danger they will receive more harm than benefit thereby: For either the abounding blood is to be diminished by Venæsection, or the ways are to be made more open by Inciders and Emollients: But by opening a Vein the present flux is often stayed, if we bleed in the Arm; or is too much promoted, if in the Foot: And if, by Inciders, we endeavour to make the passages more open, there is danger lest the blood be made withall too thin and fluid,

and the Flux should become too great: If by Emollients we attempt the enlargement of the same ways, the strength of the Womb will be in danger of being prejudic'd, and more and greater inconveniences follow than that we would change. 'Tis therefore better patiently to endure that trouble, than besides the uncertainty of making the desired change, to incur perhaps the evident danger of the greatest diseases. 2. When the Vessels of the Womb are so narrow, as that the blood can flow but slowly by them, being it self moderate both in quantity and quality, and the long continuing flux of the Terms is not so much grievous and hurtfull, as troublesome; in such case neither ought it to be esteemed as preternatural: wherefore, as was said just now, Women are rather to be exhorted to a due patience, than by much toil, and an uncertain event to be cast into danger of some more grievous disease. For whether we endeavour a cure by Inciders and Openers, or by Emollients, the Woman will incur the forementioned danger: and therefore I advise every practitioner of Physick to abstain therefrom. 3. When the blood is too fluid and serous, and the vessels also too strait (for otherwise, if the ways were open enough, the blood would flow forth more abundantly, and therefore also in less time) the flux of the Terms continuing too long, shall be cured, by using Medicines, that both restore a due consistence to the blood, and also open the passages slowly and gently. Those things, by degrees, increase the consistence of the blood, which lessen the superfluous moisture in it, and which do more inactivate it. Hydragogues, Sudorifics and Diureticks do lessen its superfluous moisture: and the same is prevented by using more solid aliment diluted but with a little drink, and moderate exercise of body. Things a little sower being taken oft, and in a little quantity, do inactivate the blood better than any thing else. As to things that gently and leisurely open the passages of the Womb, Externals are more convenient than Internals; for these latter would be apt to increase the fluidity of the blood. Externals shall be both Inciders and Emollients, which shall be used in the form of a fomentation and bath. I said, that Inciders may be joined with Emollients, because most Inciders are also Aromaticks, and therefore strengtheners of the Womb, which Emollients do in some sort weaken. Therefore lest while we cure one disease we cause another, 'tis good to use Medicines that may prevent new mischiefs. I added, that the foresaid things may be conveniently used in the form of a fomentation or bath, and that Emollients may be joined with Inciders, because so they will go directly to the Womb, (the other parts being untouched, at least unhurt) and open its vessels leisurely and gently. 4. When the vessels of the womb are too open, and do not contract themselves again soon enough, and so are the cause of a too long continued menstrual flux, then are such things to be used as leisurely, and gently strengthen and astringe the womb and its vessels, especially Externals. 5. When the affections of the mind are a great cause, then is the mind to be reduced to tranquillity. If the blood be become too acrimonious and fluid through vehement anger, it will be temper'd especially by sower things, used oft a little at a time. Lastly, The womb being much weakened and loosened by some great affection of mind, it shall be strengthened by Astringents, both such as are somewhat sower, and also Aromatick, especially mixt together. 6. VVhen the great heat of the Air, joined with moisture, is the cause of a too long flux, then it is cured by changing the Air. 7. VVhen much, or over-great motion of the body have preceded, Rest is to be prescribed and observed: in which case kindly sleep is to be procured, both by Emulsions, and also Opiates, not taking too much at once, but often. Lastly, If the blood

blood be made too sharp and fluid by Aromatical Sauces, or Medicines, let it be gently corrected, temper'd and thickned, especially by sower and tart things, but such as are more mild, taking them now and then in a small quantity; for these will not only take away that too great fluidity of the blood, but also gently strengthen and constringe the womb that is too open and gaping. To these I would have Aromaticks joined, but those that are less Acrimonious, as Nutmeg and the like, that sower things may be better temper'd, and the blood not curdled too much, or the womb straitned above measure.

Sylvius de le
Boë, prax. l.
3. c. 3.

Mensum suppressio, or, Suppression of the Terms.

(See *Menses moventia*, BOOK XIX.)

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- Whether Blood must always be let in the Foot? I.
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They must not be provoked, where there is want of blood. IX.
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The cure of a Suppression, by reason the blood is translated to the Hemorrhoids. XXII.
How Specificks must be made use of. XXIII.

I. IF the Suppression arise from too great a quantity of Blood, the quantity must be abated by bleeding liberally in the Arm: For, if the lower veins were first opened, the blood would be drawn more towards the Womb, where it would cause a greater obstruction and distension of the vessels, with danger of their breaking, or of an Inflammation of the Womb. ¶ A certain Woman, a foreigner, of a Sanguine Complexion, had divers Ails, arising chiefly from the suppression of her *Menses*: for which, when the Physicians there present had used divers remedies, and they appeared contumacious, the Advice of the Physicians of Mountpelier was desired. And in the relation, the ordinary Physicians took especial notice of this, which they wondered at, and craved a reason for it, namely, That when a vein was opened in her foot, her Terms stop'd: but when she was let blood in the Arm, they ran more freely. Which events seemed contrary to Reason, and to the common Tenets of Physicians, which hold, that the Terms are provoked by opening the Lower veins, but that they are stop'd by opening the upper. To this Query it was answered, That these Events were agreeable both to Reason and to Galen's Doctrine: For seeing this

Woman was Plethorick, and that the suppression of her Terms arose from excess of blood, to distending the vessels; that they could not well contract themselves, when the blood was drawn to those places, by opening of the lower veins, the obstruction was increased: But when retraction of the Blood was made by the upper veins from the vessels of the womb, and their plenitude and distension was abated, then they could with ease contract themselves for natural and ordinary expulsion, which is made by the Womb. And this reason is back'd by Galen's opinion, 10. Method. 2. That Obstruction is caused not only by the thickness of Humours, but by their abundance. Therefore the Physicians there present were advis'd, to abate the *Plethora* by bleeding plentifully in the Arm: and that afterwards they should draw the blood downwards, by opening the lower veins, especially about the time the Patient used to have her Terms.

II. It happens sometimes, that the stop'd Terms, being retained in the Veins, acquire a bad quality, by reason whereof the blood is rendred less fit to nourish the parts; whereupon a Leanness and Extenuation of the body follows, though the veins remain full of much, but bad blood: Then bleeding with a liberal hand uses to doe much good: Which is confirmed by a plain Instance in Galen, who, 3. 6. Epidem. by taking away no small quantity of Blood from a Woman, who had had a suppression of her Terms for eight months, and was extreme lean, quickly restored her to her proper habit.

III. By this method (See Section XIII.) which is easie and gentle, without all violence, I have brought down the Terms in several Maids, using no letting or evacuation of blood for that end; unless excess of blood, which is very rare, did concur; which indeed sometimes is afterwards observed in the suppression of the Terms, scarce ever when they are not yet come down, nor unless some great error be committed in Diet about the time when they are first ready to come down. For the sake of young Physicians I explain the matter. I think that blood scarce ever abounds in Girls, in whom the Terms do not come down of themselves, at the time of Pubescence, except they have committed some great error in their diet, though they be often suppressed in the elder, when they are plethorick: For young Girls are more carefully looked to by their Mothers or Governesses, and they have not so great a liberty of Diet allowed them, as to be able to commit any notable Error. But the case is otherwise in them that are grown, who, as being better exercised in humane affairs, have a greater liberty and opportunity of offending allowed them. I said, that a *Plethora* is very rarely observed in Girls about the time of Pubescence, because about that time their bodies grow most; and in that growth much of the blood is spent, so that abundance of it scarce ever concurs: But after the body is grown to a due stature, no wonder, in a healthy body, when the mind is chearfull, and their food is of a laudable juice, and they eat a sufficient quantity of it, if a *Plethora*, and abundance of blood be produced. And when there is a *Plethora* in those that are grown, and are beyond the first years of their Pubescence; no wonder also, if when they have a suppression of their Terms, Venæsection now and then have place, not so much to move them again, as to diminish the *Plethora*. But if, when there is no remarkable disease, or fault in the vessels of the Womb, the Terms nevertheless do not flow, because of a *Plethora* of the blood, and the motion of it hindered thereby, who does not see, if blood be then taken away; and the *Plethora* of it be also abated, that its motion is increased and renewed, whereupon its motion to the Womb, and through the Womb, is promoted? Nor is it any wonder, if in such a case Bleeding in the Arm do as much, or more good; than Bleeding in the Foot; and especially because the blood comes in greater plenty

Idem obs. 2.
cent. 1.

Idem.

Riverius.

plenty and violence out of the Arm, than out of the Foot, and therefore better able to renew and augment its motion: For how much more powerfully the blood is moved through the vessels of the whole body; so much more powerfully and easily it makes its way through the Womb, which is here required. This therefore is the reason, why at the time of Pubescence a *Plethora* scarce ever is observed, and why Bleeding is then scarce ever necessary to promote the Terms: But when the *Menstrua* have come at Pubescency, and a *Plethora* is made for the said causes, if they then be suppressed, blood may profitably be let. And though sometimes it may so be, that the Terms come too slow because of a *Plethora*, and therefore they are promoted only by letting of blood seasonably; yet because for the most part some fault in the vessels of the Womb does concur, arising from a bad diet, therefore Medicines are usually required to open the obstruction of these vessels, whether they alone be sufficient, or upon the urgency of a *Plethora* Bloodletting be joined with them. ¶ When the Terms or *Lochia* stop in the Womb, then they are commodiously evacuated by its neck, as well the Internal as External; and indeed partly by External remedies, partly by Internal. Among the Internal, Bleeding in the Foot may very well be reckoned, since often when the blood is prepared for its natural flux, especially when there is a *Plethora*, and therefore the blood runs too slow; the Terms and *Lochia* which are stopped by a *Plethora*, are often by means hereof moved and brought to their natural flux. But when either of them stops because of an obstruction in the vessels of the Womb, and in the orifices of the vessels, then, unless there be a *Plethora*, Bloodletting does more harm than good: because, by diminishing laudable blood, not exceeding in Quantity, it only weakens Women, and does not at all restore the flux of either. Then there is need of such medicines both Internal and External, as remove and amend the Harm, if any be done to the Womb by the External Cold of the Air, Water, Snow, a Floor, &c. And such things as incide, attenuate, and make fluid, congealed and obstructing Phlegm, and that may move and remove it, &c. See Section XIII.

Sylvius de
le Bcē.

IV. If the *Saphena* cannot be opened, because the Feet are swollen, or if the Patient be against it, and bleeding in the Ham, and against setting Cupping-glasses to the inside of the Thighs; let Leeches at least be set to the Sedal Veins, and let a moderate quantity of blood be taken thence. Nor is it any hindrance, that by this way derivation is made from the Womb, upon which account the operation appears suspicious, that is, lest the Terms should be hindered: for when the thick and feculent blood is evacuated thereby, the blood that remains, will easily be made more fluid, and will run to the usual places; especially if after this remedy the Womb be fomented, and dry Cupping-glasses be set to the Hips. But we must take notice, that this must not be done, when the Terms are present or at hand.

Sylvaticus.

V. For the motion of the humours lodged in the Womb, Galen, 13. Meth. 19. propounds the applying of Cupping-glasses to the Pubes and Groin: But a safer and more successful derivation may be had from a replete Womb, by setting of Leeches to the Veins of the Neck of the Womb: for a good quantity may be taken away well enough. Hieronymus Nigrifolius first began to put this operation in practice.

For. 18.

VI. In Women and Maids, that labour of an obstruction of the *Menstrua*, which arises not from any foulness in the Bowels, but only from the obstruction of the veins that come to the Womb, according to *Minsitibus* his advice, Vomits must be avoided.

Frid. Hofmannus.

VII. The Terms being near in some *Viragoes*, and restagnating, because of the narrowness of the Vessels, do create a great deal of trouble to the ferment, both of the first and second digestion, so that

thence there arises loss of colour in the face, and other symptoms representing the green-sickness in Maids, especially if over and above there be an Astral Influx, that hinders the Terms, the said Symptoms do not only grow worse; but the Cure also proves very difficult. In the mean time, at the beginning, violent Expellers, which only disturb the morbid matter, and do no good, must be avoided; but they must be moderately moving, and also they must help the fermentation of the first and second Concoction. Of which rank are, Extract of the lesser Centaury, Juniper, Mugwort, *Species Dialaur.* *Minsitibus*, Extract. *Splen. Bov.* *Elixir proprietatis Paracelsi*, *Uterinum Crollii*, if instead of Spirit of Wine, Spirit of Baum and Sage be used, adding toward the latter end a sufficient quantity of Salt of Mugwort: for these things moderately provoke the Terms, strengthen the concoction of the Bowels, resist putrefaction, and are good against Worms, if there be any.

Frid. Hofmannus.

VIII. Galen, 5. Aphor. 46. says, that if the Mouth of the Womb be compressed by a swelling, the Terms must not be provoked: The reason is, because the swelling would increase, and the Disease would be enraged, by giving things to provoke the Terms. Thus they are in error, who, when the Vessels of the Womb are compressed, either by a swelling, or too much Fatness, they do open the *Saphena*, and they do not see that the swellings increase. Therefore the Basilick vein must be opened.

Sanctorius.

IX. If the Terms flow not for want of blood, as after long Fevers, great Evacuations, and in any notable extenuation of the body, they must not be provoked, before the body be recruited with convenient restorative food, before a sufficient quantity of blood is bred, and before the Disease, the cause of extenuation, be conquered; which when done, the Terms usually come of themselves: But if it do not so fall out, to the end Nature may be recalled to her duty, blood may be taken from the lower Veins, according to the measure of the strength. But we must take notice, that every extenuation does not denote want of blood: but only that which succeeds consuming Causes.

Riverius.

X. We must never use Remedies to provoke the Terms, unless universal Evacuations were premised, lest the humours being moved in great plenty to the Womb, should increase the obstruction; or being much attenuated, should fall on other parts, and produce much mischief. So *Schenckius* reports, that a Physician of Venice gave a Woman, for the suppression of her Terms, a Decoction, before he had evacuated the Phlegm, which was the cause of her Obstruction, upon taking of which she fell into a Palsie.

Fortis.

XI. But they must be given in a great quantity; because much of their virtue is abated by the way from the Stomach to the Womb.

Riverius.

XII. If they be given at the going in or out of a Bath, they exert their virtue the more powerfully, because the Medicine gets into an open and warm body; and yet much more effectually, if they were given before bleeding in the foot.

Idem.

Some generous Remedies in a pertinacious Obstruction.

XIII. Seeing the suppression of the Terms is caused, for the most part, by the obstruction and stuffing of the Vessels that go to the Womb, and through the Womb, we shall pursue this sort most. And whereas we have shewn, that this said obstruction is produced either by a viscid and glutinous Phlegm, or by such a blood, it easily appears, that inciding and detersion are indicated, and required by the tenacity of the humour, for its cure, and the provoking of the *Menstrua*. And both Acids and Aromaticks, and things abounding with a lixivial Salt, as well fixt as volatile; and therefore fixt and volatile Salts themselves. But because Acids serve to produce

duce a glutinosity, especially when they incline to Austerity, therefore in curing of this Disease Aromaticks are deservedly preferred, which Experience also it self testifies to be better than Acids. Whether things be bitter or not, but of various taste, they must be called Aromaticks. And whoever is conversant in the Chymical mutations of things Natural, he will find both far more powerfull things, and more easie to be used, than these things that are commonly used; As Volatile Salts made of infinite things, of all Bones, Horns, Hoofs, Hair, Blood, Urine, Fleish, and all parts of Animals whatever, that is, all Volatile Salts are good, though I should prefer Oleous ones before the rest; because they doe their work more kindly and successfully. Whence also it is manifest, that fixt Salts are less to be valued, because since they are purer, they operate the more violently. And the said Volatile Salts may be conveniently used at any time, and especially (when all the blood is glutinous) at Dinner and Supper in a draught of Wine, Beer, Broth, or any other liquor the Patient shall chuse: But when the whole mass of blood is not glutinous and pituitous, though the said Volatile Salts may be used at mealtimes; yet they may be used to greater advantage at another time, and especially when the Phlegm, first dissolved by the motion of the body, heat of the Air, &c. and carried to the Womb, is by and by coagulated there again by the subsequent Cold; for then it is good to take Volatile Salts upon an empty Stomach, and also to dispose the body it self to a Sweat: for so the virtue of the Medicines will the easilier penetrate to the farther end of the vessels and passages. And above the rest I recommend Spirit of Sal Ammoniack to all, when a stoppage of the *Menstrua* happens suddenly and lately upon heating and cooling of the body; by benefit of which alone I have very well cured several in a short time, by giving 3, 4, 5 or six drops, as it is stronger, or weaker, in a spoonfull of Wine twice or thrice a day. And not onely a Volatile Salt it self, but all things also abounding with it, whether Sudorificks or Diuretick, are very proper. It will be usefull also, in a suppression that comes gradually, to add such things to the Deobstruents, that are used towards the latter end. For Example, make the following Apozeme; Take of Root of Parsly, Lovage, each half an ounce, shavings of *Guaiacum* three drachms, *Sassafras* half an ounce, Juniper Berries two ounces, Bay-berries half an ounce, *Scordium*, Pennyroyal each half an handful, tops of lesser Centaury half an handful, Millet-seed two ounces. Boil them in fair Water; to 25 ounces of the Colature add of Syrup of Mugwort, *Cardus Benedictus*, each one ounce and an half. Tincture of Cinnamon and Castor each half an ounce, Oil of Amber eight grains. Mix them. Let the Patient take a draught of this Apozeme warm early in the morning, and being well covered with clothes, let her lye to Sweat; but if within an hour after it do not come, let her promote it by taking broth, let her often repeat it, and about the usual time of her Terms, to the end the blood also may at last be forced to the Womb. But if the said Phlegm redound not onely in the blood, but in the Head and Guts, it will be good and beneficial now and then to abate and evacuate it by Phlegmagogues, among which, Agarrick, Turbith, Hermodactyls, *Coloquintida*, &c. are vulgarly commended. And among the Chymical ones, all Medicines made of Mercury are chief, both præcipitate and sublimate, especially *Mercurius dulcis*.

Among External Medicines Baths, Fomentations and Fumes are deservedly commended; from which either the arising Exhalations, Vapours, Fumes, or the Penetrating Liquour, do incide and attenuate the Phlegm or other glutinous humours, sticking in the Orifices and Vessels of the Womb, and causing Obstructions; and so make them fluxible and apt to give way to the blood; then, or

afterwards, desiring an *exit*, or to go out with it. Baths certainly, in which Women use then to sit above the Navel, do by their moisture insinuate themselves into the outer Neck of the Womb, and then into the inner, and do set loose and dissolve every glutinous humour whatever, that so frequently sticks in the cavity of the inner Neck, and that being within a-while removed thence, they penetrate inwards, and incide and dissolve, and so make fit for efflux the glutinous humour there also, that sticks to and in the Orifices of the Vessels of the Womb. But warm Baths are used, that so they with more speed, ease and efficacy produce their desired effect. As to the Liquour of the Bath, Water may conveniently be used, and at the time of Use a little strong White-wine, not Red, may be added, as also Spirit of Wine, and Volatile Salt, though this do not augment the Liquour so much, as it promotes and intends the virtue of the rest of the things that are decocted. As for the things that are to be boiled therein, I commend aromatick Plants, i. e. strong smelling ones, that have a sharp and gratefull taste, but especially those they call Hysseric. But since drying Baths are observed not always to promote, but often to hinder the Flux of the Terms, here also Roots of Lilies, Seeds of Line and Fennugreek, &c. will be proper to boil, not onely to incide and conveniently to attenuate by the Aromaticks, which are often too drying, and therefore incrustating, but also to mollifie. For so the glutinous humours being partly attenuated, partly mollified, are more easily made fluid; nay, they are brought to a Flux and Efflux, and so the highway for the stoppt blood is cleared again, and laid open.

But it is good for the Bath not to be over hot, lest too much Sweat be caused, whereby when the more serous parts of the blood are exhausted, the glutinous humours would be rendred more glutinous. Not must the continue long in the Bath, for the same reasons: for unless by means of it the Obstruction be removed quickly, that benefit will scarce be obtained by tarrying long therein.

Fomentations are made of the same things with Baths, and are applied to the *Pudenda*, and that most fitly with Sponges or woollen Cloths, but not with linen: for they, as well as Sponges, soak up more Liquour than linen, nor do they so easily let it run away; besides, they keep the heat of the Liquour longer in them, without which Fomentations doe more harm than good. Akin to these is the Vapour arising from a Decoction heated, and received into the *pudenda*, through an open Chair, and so penetrating inwards. Thus Exhalations doe good, which may commodiously be made of Salt of Tartar, or of any other fixt Salt, and Sal Ammoniack, which, because it is most penetrant, will doe very much good here, and is deservedly preferred before many other things.

XIV. Pessaries and Uterine Clysters ought onely to be prescribed for Women that are married, and that lye with Men: but for Maids, *Nuptialia*, Fomentations, Injections and Suffumigations.

XV. Suffumigations are approved of above all ways; for so the Medicine acts most effectually, and a Fume also of Spices brings down Womens Terms, *Aph. 28. 5.* For the virtue of Medicines is abated in their passage, when they are given in form of a Powder, Potion, Pills or *Bolus*, before they get to the Womb, which it is not, when they are administered in form of a Suffumigation. Besides, since things that provoke the Terms are hot, they often by the way hurt a hot Liver: for the Terms are often stoppt by the thickness of the blood, which is caused by a hot Liver. And this way is preferred before the rest, according to *Galen*, because you may meet with some Women, who will not endure Clysters or Pessaries, who will admit Fumes; and

and they penetrate more. The only hindrance is Weakness of the Head: for some Womens Heads are easily disturbed by Aromatics: But in admitting of a Suffumigation two things must be observed from *Galen*, 1. That Women be girded. 2. That the Fume ascend through a Pipe into the Neck of the Womb: for so the Fume does not easily get into the Head.

Capiuac-

XVI. In a diminution of the Terms, *Mercurialis Conf.* 8. highly commends two Issues below the Knees on the inside. And *Conf.* 108. he says, that an Issue below the Knees on the inside of each Leg is very effectual.

Sylvius de
le Boë.

XVII. I have hitherto observed, that we must make no more haste than good speed, and that more may be done by gentle Medicines than by strong. That therefore the Cure may be safe, we must abstain from all things that have any danger in them.

Fortis, cent.
2. conf. 163.

XVIII. *Avicenna* orders, when Women spit blood, because of a Stoppage of their Terms, that they must be provoked by Bleeding, Cupping, Frictions, and other such things; yet not by Medicines that move the Terms; but near the usual time we may add a spoonfull of distilled Savine Water, or five drops of its Oil to a Decoction of white Saunders, *Guaiacum*, Box, *Rhodium* root, &c. And outwardly, at this time, that is an effectual Remedy; Hempen Thread newly boiled, and still warm, applied twice a-day for an hour, to the region of the Womb: for we may not go higher.

Walau.

XIX. The lower parts must be kept warm, and the upper cold. Women offend often herein, when they cover the whole body with Bed-clothes, and hereupon all the parts draw upwards and downwards.

Idem.

XX. Medicines must be given at the usual time of their coming: For if a Physician should stimulate Nature in the full Moon, that was accustomed to her excretion in the new, he would then labour in vain, unless he used most violent Medicines, wherein there is more harm than benefit.

Mercatus.

XXI. A Flux of the Terms, which stops of it self, by reason of the Woman's Age, though they do not require to be brought again; yet it is necessary to disburthen Nature by some Evacuation: For though this Suppression do not cause the most grievous Diseases; yet, it frequently breeds tedious ones, and such as are difficult to cure. Therefore every year, till Nature be broken of her custom, she must be eased by gentle Evacuations.

Riversius.

XXII. If the Blood come by the Hemorrhoids, and be turned from the Womb, the Cure will be very difficult: for whether you use Attractants to the lower parts, they draw to the Seat; Or if you use Astringents, they also, because of their vicinity, repell whatever comes to the Womb. The only way of Cure therefore, to do any good is this, to apply local Medicines to the Womb, which may draw the moved humour more to the Womb.

XXIII. Specifick Medicines use most conveniently to be given a few days before their usual Flux, after Baths and Fomentations, wherewith the Vessels of the Womb are heated and opened; then after taking of these Medicines, it is good to put the Feet into a Decoction of some convenient Plants, and then to walk. Let the Woman sit up to the Navel in Fomentations, and let her hold the boiled Herbs, put in a Bag, to her Belly: After Fomenting, the parts near the Womb may be anointed with Oils and Unguents, as *Unguentum Martiatum*, Snake's fat, with distilled Oil of Savine, Lavender, Bayes and White-lilie. Outwardly let another Woman's Smock, newly bedaubed with her Menstrua, be put on, which is very well approved from experience; for, in a manner, by Sympathy it excites the Mumial Ferment of the blood within the Womb.

F. Hofmannus.

Mesenterii Affectus, or, Diseases of the Mesentery.

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the Vessels? VIII.
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In its Ulcers Mineral Waters must be avoided. XII.
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Obstructions must be prudently opened. XV.

I. IT is a common mistake amongst many, who neglect all Anatomical knowledge, to take a Tension reaching lengthways on each side of the Abdomen, for a Swelling of the Mesentery or Liver, when it is indeed a Swelling of the right Muscles. Truly it is an inexcusable error; for the Mesentery lies under the Guts, and no part of the Mesentery arises above the Guts, which can be felt by the Hands in the Abdomen; but these right Muscles are not onely above the Guts, but above the Omentum and Peritonæum, and above the transverse Muscles of the Abdomen. Wherefore no man can by feeling any part of the Abdomen judge any thing for certain, concerning the state of the Mesentery: for indeed these two parts of the body are too far distant in site and origination. This Tension lengthways may be found in a Thousand People, that are very well in health. And this error in notion passes into operation: for the Patients are ill treated with divers outward Applications.

II. Medicines, that open Obstructions, must procure a firmness and strength to the Liver and Stomach: For, as *Avicenna* lays excellently well, *lib.* 3. *Fen.* 14. *tr.* 1. c. 1. He that uses a Cure for Diseases of the Mesaraicks, without any regard at the same time had to the Liver as to the cause of them, is not unlike to him, that fences the Feet, when they are hurt by something being amiss in the *Spina dorsalis*, but omits the chief of the Cure, which resides in the Spine.

III. Purging must not be plentiful nor constant and continual, nor exceeding the bounds of Moderation. The condition of the Passages seems to persuade this, and Nature also, who is very observant of Moderation and Security, and the Nature of the Humour that causes the Obstruction.

Mercatus.

IV. Preparation with Syrups, when the extenuated Humours run to the stop parts, will undoubtedly cause stronger Obstructions. ¶ It is better in Winter time to doe it with Elestuaries than with Liguours. ¶ Viscid and tough Humours are, according to *Galen*, 15. *Meth.* 12. corrected with Attenuants and Extensives. But the bilious and adust, and which tend to Inflammation, are made fit for Evacuation by moderate Coolers and Detersives.

Idem.

Fernelius.

V. Left Bile should be increased, or occasion given to the Liver or Spleen to swell, we must, as much as may be, have a care of Sweet things.

Mercatus.

VI. When the Humours are prepared, a Vomit is proper: But Obstructions must not be opened by a Vomit presently, unless there be great store of bilious and sharp matter, lest the Inwards should be

Martini. be strained by the violence of the Vomit, or the Head should be filled.

VII. Bathing in Sweet waters, used with Moderation, is good to open the Pores of the Skin, and to amplify and open the passages of the Mesentery, and to remove the Filth that sticks there. But it must be used with this caution, that nothing be in the first ways, that may in a moment be drawn to the body; that there be no great impurity in the Bowels; and that the Concoction of the precedent Food be finished.

Idem. VIII. If the Disease have its original from a Straitness of the Veins, Attenuating Meat, according to *Aëtius* his Judgment, must be given three or four times a day, but in a small quantity.

IX. Diseases of the Mesentery require not violent Openers, because of their relation and vicinity to the Heart, Spleen and Stomach, and communication of Offices and Diseases, whereby they quickly affect one another.

Idem. X. For the Pain of the Mesentery, if it be violent, *Laudanum Opiatum* is good inwardly, dissolved and mixt with Purgatives, which stops the Pain by Purging.

Fr. Hofmannus. XI. Purgatives and Diureticks in the beginning of an Inflammation, can seldom or never be used safely: for there is fear, according to *Galen*, 14. *Metb.* 11. lest the Liver and Mesentery be sooner or worse inflamed.

XII. If an Abscess of the Mesentery be brought to Suppuration, *Reason* tells a man, that all Waters with a mineral virtue in them must be avoided: for though they do much good to the Bowels designed for Nutrition, by attenuating the thickness of the humours; yet, because by their penetrative and absterfive virtue, and by a peculiar faculty, contracted from Mines of Vitriol, Iron, Salt and others, they corrode all Ulcers in the inner parts; for these villanies, as *Pliny*, l. 25. c. 3. speaks, they ought to be repudiated.

XIII. Among Balsamicks, according to *Galen*, *Cypus Turpentine* is chief, a Medicine fit for many uses, and exceeding proper for Inflammations; especially where the peccant matter lies in the Loins, and about the Kidneys, and causes Pain; yet it cannot safely be given to such as are inclined to Epilepsies, or to other grievous Diseases of the Head.

Martini. XIV. Of all the Guts, onely the *Colon* is subject to Exulceration, which produces *pus*, which many think does run from an Ulcer in the Mesentery; and they unhappily use Purges and Clysters, after which the Disease grows worie.

Riolanus. XV. When the first ways are emptied; we must cautiously proceed to the opening of Obstructions both with Preparatives and Aperients, and with Purges themselves. For Aperients and Attenuants that are too strong do not onely prepare the Humours, but carry them to the Liver; and there is the same Inconvenience in strong Purgatives.

Fortis.

(seeing if it were a true Conception, we should destroy it) is a very hazardous thing, and should not be rashly undertaken, but when we make the least doubt of it, it should be omitted. And it is better then either to leave the business to Nature, and wait the event till we be certain of the thing, or at least to hinder the growth of it by taking away a little nourishment from it by Bleeding; or by giving of Purges to solicit Nature, that, as she expells other Uncleanesses, so perhaps she would vouchsafe to force away a Burthen, that is grievous and strange to her. Nor let us fear to give them, because if perhaps it were a true Conception, there might be an Abortion, seeing we have observed that it does not follow, in many Women with Child, who have often been so evacuated, or have had long *Diarrhoeas*; and Nature is not so easily moved to the Excretion of things that are natural, as of things that are preternatural and burthensome to her. But if we be certain of it by many concurrent signs, especially if, after the time of Birth is over, a swelling and hardness of Belly be found by the touch, then, that Nature may endeavour Excretion, we must excite her, by giving and applying, and injecting things, and we must open and dilate the passages, that it may get out of the Womb.

II. If it so happen, that a Mole cannot be parted, and when it is parted, if Nature be not able to expell it, the Chirurgion must set the Woman in the same posture, as we said she must be set in extraction of a Child from the Womb; Then opening the *Pudendum*, and putting in an extractory Instrument, which, from its likeness, is called a *Griffon's Claw*. And when it is got into the Womb, it being opened and dilated, take hold of the Mole. Nor can it otherwise be taken hold of, especially if it be a thick one, because of its roundness; for it has no handle to take hold by: And when it is onely sought for with the Hand, it slips away, because of its lubricity, and runs like a Ball all over the capacity of the Womb. But it may more easily be taken hold of by the *Griffon's Claw*, if the Woman's belly be squeezed this way and that, and then the Mole be run into some corner, whence it cannot easily slip: for so at length being taken hold on, it may easily be extracted. When the Mole is extracted, the same care must be taken as of a Lying-in-woman.

III. In Extraction of a Mole some use sharp Hooks, or a *Griffon's Claw* (as they call it) but in my opinion, not without extreme hazard: For if a Hook should miss, it might easily tear the Womb. For this reason I have invented a *Forceps*, whose extremities are made in form of a *Duck's Bill*, but deep enough to receive the Hooks: In the middle whereof there are three teeth, square and very sharp, so as that they stand in a right line one against the side of another. Therefore when the *Forceps* is shut, not a tooth appears; and besides, let the *Forceps* miss never so much, it can never hurt the Neck of the Womb.

IV. There is a manifold difference in Moles: and this may be reckoned among the rarer sort, which I had the hap to see this present year, 1631. in the month of *March*. A Noble Woman (I am an ocular Witness) about thirty two years old, who had first been happily brought to bed of a Child, thought her self with Child within three months; she was sickly all that time; having, by the Prescription of her Physician, taken a Purge, she fell into Pains of Travel, then abundance of various things came from her Womb, bloody, membranous, watry things, clotted and black blood; and, which is the most to be admired at, an infinite number of Eggs as big as Pease, sticking one to another, just as in the Row of a large Pike, or a Trout; but besides, there was an Ovi-form piece, on the outside like the *Parenchyma* of a fat Capon's Liver, the inside

D d d

side

Mola, or, A Mole.

The Contents.

Extraction must not be undertaken rashly, but Ezyulsion must rather be tried by Medicines. I.

Paræus his way of extracting it by a Griffon's Claw. II.

Hildanus his way by a toothed Forceps. III.

Cast out by Purging. IV.

Medicines.

I. Since usually we are not certain of a Mole, though there be great suspicion of it, yet to set upon the thing with strong Medicines and to endeavour to cast out the Conception by force

side full of black clotted blood: All these things were promiscuous, and filled a large Bason. It is very likely these Eggs were inclosed in the torn Membrane, which, being thrown into warm water, were not dissolved. Several such examples are found in *Schenckius*.

Medicines especially made use of by eminent Physicians.

1. There is not a better Secret than the Powder of a Secundine given in water of Mugwort, Mather, or Penny-royal. *Hartman* performed the Cure in several successfully with this.

2. Before Bathing let the Belly be chafed with Malmsey-wine; if there be a Child, it will be strengthened; but if not, the Woman will void abundance of bad humours by her Womb. It has been often tried.

Morbilli, or, The Measles.

The Contents.

A bad method of Cure sometimes makes them mortal. I.

The safe method of Cure. II.

The mitigation of the Cough, which is familiar to them. III.

The Cure of the Loosness that follows them. V.

A hot regiment, and taking of hot Medicines does harm. VI.

I. **THIS** Disease, after Shivering and Chills, begins the Tragedy with inequality of Heat and Cold, which follow one another by turns; at length, on the second day, it ends in a perfect Fever, attended with great Sickness, Thirst, a White Tongue (but not dry) a Cough, Heaviness of Head and Eyes, and a perpetual Drowsiness; for the most part an humour runs out at his Nose and Eyes, the Patient sneezes, as if he had taken Cold, his Eye-lids swell (that is, a little before they come out) he vomits, he has often a Loosness with green stools. The Symptoms usually grow worse, till the fourth day, at which time usually little red Spots, like Flea-bites, begin to break out about the Fore-head and rest of the Face: They go away usually on the eighth day, at which time the Vulgar (being deceived by the time the Small-pox use to continue) hold they strike in, though indeed they have finished their course designed them by Nature; and the Symptoms that supervene, when they go away, they think they come therefore, because the Measles struck in too soon: for then one may observe, the Fever and Difficulty of Breathing is increased, and the Cough is more troublesome. Children especially, that are kept over hot, or they who have taken Medicines to bring the Measles out, are subject to this mischief, which shews it self, when the Measles are going away, upon which they are thrown into a *Peripneumony*, which kills more than either the Small-pox themselves, or any Symptom whatever, which belongs to that Disease; though the Measles, if they be skilfully treated, have no danger at all in them. A Loosness also follows such, not without extreme hazard to the Patient. Sometimes also, after a very hot regiment, the Spots are livid, and then black; but this only happens in grown persons; who may be given up for dead, as soon as that Blackness appears, except they be presently relieved with Phlebotomy, and the refreshment of a more temperate regiment.

Bydenham.

II. As the Measles do in their Nature agree with the Small Pox, so also in their method of cure, hot Medicines, and a hot regiment are very full of dan-

ger, how frequently soever they be made use of by ignorant Nurses, to this end, that they may keep the Measles from the heart. I have had the best success in this method above any, in which the Patient was kept in his Bed three or four days after their coming out, to the end the blood might gently, according to the Nature of the Disease, discharge by the pores of the skin the inflamed particles, easily separable, by which it was hurt, adding neither more clothes, nor more fire, than what he used, when he was well. I kept him from all flesh, I allowed him Oatmeal and Barley Grewel, and sometimes a roasted Apple. His drink was small Beer, or Milk boiled with thrice as much Water. I would ease the Cough, which is almost constant to this Disease, with a draught now and then of some pectoral Decoction. He that takes this course, seldom dies, nor is he afflicted with any new Ails, besides the necessary and inevitable symptoms of the Disease. *Idem.*

III. The Cough is the most tiresome of all, in which notwithstanding there is no danger, till the Disease is gone, and when it still continues for a week or two, it may easily be removed by a good Air, a Pectoral Decoction, Syrup of Violets, Maiden-hair, with Oil of Sweet Almonds, and other things good for the Breast; yea, it decreases by degrees of it self, and at length goes away. *Idem.*

IV. But if the Patient, after taking of Cordials, or too hot a Regiment, or while the Measles are still high, or after they are gone (which is most usual) be brought into hazard of his life by a violent Fever, shortness of breath, and other accidents, such as use to afflict *Peripneumonicks*, I always breathe a Vein, with very good success, even in the Arms of tender Infants, taking away such a quantity of Blood, as the Age and Strength require. Sometimes also, when the disease is urgent, I have not been afraid to bleed again. Truly, through GOD's blessing, I have saved several Childrens lives by letting of blood, when they have been just ready to be killed by this Symptom. And this befalls Children after the Measles are gone; it is so destructive to them, that it may well be reckoned one of Death's prime Instruments, which kills more than the very small Pox, and I have not yet met with that Man, who could help it by any other certain method. *Idem.*

V. Moreover, a Loosness, which often follows the Small Pox, is, in like manner, cured by bleeding, for seeing it owes its rise to exhalations of the inflamed blood, getting into the Guts (which is usual also in a Pleuritic, *Peripneumony*, and other Diseases, created by an Inflammation) whereby they are stimulated to excretion, only letting of blood will give relief, whereby both revulsion is made of these sharp humours, and the Blood also is reduced to a due temper. *Idem.*

VI. What I have said of the cure of these Symptoms, which come when the Measles are going away, may sometimes agree with them, when they are at the height; if, to wit, they owe them to an artificial, if I may so say, and acetic heat. This year, 1670. I visited a servant Maid, who lay ill of the Measles, with a Fever, shortness of breath, and Purple Spots all over her body, and other very dangerous Symptoms; and because I attributed all of them to over-hot keeping and Medicines, abundance of which she had taken, I ordered her to be let blood in the Arm, and I prescribed her a pectoral and cooling Ptilan, to be taken often; by means whereof, and of a more temperate regiment, both the Spots, and all the other Symptoms vanished by degrees. *Idem.*

(For the Medicines, See *Variole*, BOOK XVIII.)

A

A GUIDE TO The Practical Physician.

BOOK XII.

Of Diseases beginning with the Letter N.

Narium Affectus, or, Diseases of the Nostrils.

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A safe Remedy for the Hæmorrhoids, Polypus, and any Excrecence in the Nostrils. VIII.

Ulcers are best cured by Fumigations. IX.

The Cure of a Red Nose. X.

I. **C**ELSUS says, that a Polypus sometimes withers away, which perhaps is true in a little one, in one beginning and in a soft Polypus: Otherwise, Experience shews, that such Medicines do no good, both because they cannot stick long on, by reason of their moisture, and because if they have a burning faculty, they inflame and put to pain the inside of the Nostrils; and therefore it is evident, it can only be happily cured by Excision. ¶ Applying of Medicines does more harm than good: therefore a Polypus must be taken away by Chyrurgery, by means of an Instrument in *Scultetus*, tab. 12. fig. 1, & 2. To which this may be superadded, namely, that two or three square and sharp teeth must be made in the concave upper part of it, that it may hold the faster. When the Poly-

pus is taken out, let them be seared with a red hot Iron let through a Pipe into the Nostrils. J. Van H. in Microtechn.

II. There are some, who, as the report goes, tying three long Needles together, and take holding of the Heads, do lance so long with the Points, till all that is faulty be taken away and waste by pricking, then they presently wash it with Oil, and doe the same the following days, till the Man is cured.

¶ Which gentle Operation, what hinders, but that it may be used to our Polypi? For I can upon my own experience affirm, that I cured such a Swelling newly risen in a Nun, onely by several times pricking it with a Lancet, and making it bleed a little. Hierocles.

III. After frequent Catarrhs the Wife of N. had a large Polypus, white in colour, in substance Phlegmatick, conspicuous not onely in the Nostrils, but in the Throat, with a double Caruncle, the one white and soft, the other livid and hard, differing very little from the nature of a Carcinoma: and that part being taken hold of with a Forceps, which threatned a Carcinoma in the Throat, and being pulled violently the whole Polypus, having eight feet, came out with it, and all of them were covered with a Membrane, within which was contained concrete Phlegm, in most of them soft and pellucid, like the pulpy part of a white Prune, but in others hard and opaque, like a singed Horn: A good Argument certainly, that we may be afraid not onely of livid and melancholick Polypi, but of white and pituitous ones; especially if from hot blood, or from inclosed heat they degenerate into the nature of a Carcinoma, as here. Therefore they are under a Mistake, who think that a Phlegmatick Polypus has no danger in it; for it is not ever true. Severinus.

IV. Have a care you do not think the noxious and redundant Humour, whence this Evil arises; does always come from the Brain through the holes of the Os Cribiforme: for that matter comes thither

not of the Vessels which are within the Nose. Wherefore we must direct our Cure to the Parts, that make Blood, rather than to the Brain. I examined carefully in every part the Head of a dead Man opened, who in his life time had often had a *Polypus*. I found the Brain well, and those nervous Filaments, which run to the holes of the said Bone, and the holes I found entire; on the contrary, the parts in the *Abdomen*, the Liver and Spleen were out of order.

Schneiderus.

V. If you will try to cure it with Medicines, you must fly to Powder of calcined Vitriol, or to Root of white Hermodactyl, mixt with Honey of Roses, or Savine-water; by which Medicines the Coat of the *Polypus* is rather corrugated than opened: Nor does this Powder penetrate through the hole near the end of the Nose, which is stoppt by this Excrecence: Whence notwithstanding except you get out the Caruncles sticking there, they will continually increase, and the Pulp which remains in the dried Coat, will continually swell with an afflux of new humours: Unless perhaps its Coat be so round and soft, that the Pulp, as well as the succingent Coat, is consumed. And when some have found such success from it in some place, they have therefore thought, but rashly enough, that the foresaid Powder will doe the same every where, and will infallibly cure any *Polypus*.

Tulpius.

VI. One had his Nose cut off, where the Bone ends in a Cartilage. A Country fellow held the piece next the Teeth down with his Fingers. He applied Millefoil bruised with black Wine, and bound it up after a rude fashion, upon which the Blood stoppt quickly, and the Wound cicatrized finely in a short time.

Hollerius.

VII. In the year 1590. when the Duke of Savoy made Warr upon Geneva, a chaste Maid fell into the hands of some Souldiers; and when they had attempted to force her in vain, they were so vext that they cut off her Nose. Two years after she came to Lausanne, to Mr. Job. Griffonius, a most successful Chirurgion, who undertook to restore her Nose; and restored it, to the admiration of all Men. The first Inventour of the Operation and Cure was Gaspar Taliacotius, Professour at Bologna.

Hildanus.

VIII. The Hæmorrhoids, which are soft and without Pain, though all Writers commend the Cutting of them with an Instrument, or the Burning of them with an actual Caustery; yet I have found a much easier and safer way, whereby I have seen not onely the Hæmorrhoids in the Nostrils cured, but the *Polypus* also, and any superfluous Carnosity growing in the Nostrils, or in any other place, without trouble to the Patient. This is the way; Take a Ruptory (the Caustick Stone) then get an Instrument made of Lead, about the length of ones finger, of such a thickness as that it may be put into the Nostril, which at that end that is put into the Nostril, must be made hollow, like a Box, so that the Carnosity may be received into the hollow place, with a Ruptory in it, and the sides of the Cavity may defend the Nostril from being hurt by the Ruptory. Let the Patient hold this Instrument to his Nostril steady with his hand for an hour. When it is taken out, apply Butter, till there be an Eschar, and the burnt flesh be removed. Then apply the Ruptory again, till all the superfluous flesh be consumed, always applying Butter after the Ruptory. But if an Ulcer should happen to remain, let it be cured with things proper for an Ulcer in the Nostrils. I experienced it in X. who had a Carnosity in his Nostril, which not onely filled the Nostril, but hung out half an Inch. This Carnosity was perfectly removed without any deformity.

Bayrus.

IX. Ulcers of the Nostrils may best be cured with Fumigations; wherefore it is best to make Candles of red Wax: For the Smoak of such a Candle does good by drying, especially if it be kept in a narrow and close room: And we find, that the

Smoak is received when we sit up late at our Studies, for afterwards our Spittle and what comes out at our Nose, is made black with Smoak. In this manner I have cured an Ulcer, which neither the Italian nor French Physicians could cure.

Rondeletius.

X. A Woman had always a red Nose, especially in Winter; after she had taken a gentle purge, she found benefit by this Unguent, which Giffertus Horstius used at Rome; Take of live Sulphur 3 drachms, white Ginger 2 drachms, let them boil gently with white Rhenish Wine and Rose-water till the liquor be consumed, then with fresh Hogs Lard make an Unguent. She anointed after Supper, and in the morning washed with water of Roses, Beans, and a Decoction of Bran warm. It is good for Pustules in the Face, as well as for a red Nose.

Forestus.

Natta, or, A Wen.

(See Tumores, BOOK XVIII.)

The Contents.

A great one in the Thigh happily extirpated. I.
In the Head. II.

I. *Johannes Ferber*, about 24 years old, had a Wen arose on the inside of his right Thigh, which in two years grew so vastly, that it was as big as any three Mens Heads, and hindered his going. A certain Chirurgion corroded this Excrecence with a caustick Medicine, to let the Matter out, and then he intended to close the Ulcer with Escharotics afterwards. But when he found there was no fluxible matter, away runs the Empirick, and leaves his Patient to look to himself. This Patient an. 1634. came to *Ulm*, and there implored the help of *J. G. Baulerus* a Chirurgion, who, when he could not heal the foul Ulcer with any Medicines, by my Advice and *G. Riedlinus*, he took hold of the exulcerated and painfull Wen with a *Forfex*, he cut it off with a cuttillary Caustery, and when the Eschar was removed, he brought it to a fine Cicatrice with *Ceratun divinum*. When we had looked upon the Substance of the Wen that was cut off, which was perfect flesh, and had Veins and Arteries, we enquired of the Patient, whether he was naturally so lean? He told us, that before this Wen grew so vastly, he was well in flesh. Hereby we were convinced, that the Excrecence had drawn by the Veins and Arteries almost all the nutriment, wherewith the whole body should have been nourished. When he was well, I advised him to use a moderate Diet, and once a month to set six Cupping-glasses with Scarification to his back, till the Habit of his Body by little and little were accustomed to assimilate the blood to it self, which Nature before had transmitted to nourish the Tumour. The young Man followed this Advice for half a year, and afterwards he lived well in health.

Sculetus.

II. A Wen, a sort of Tumour with a Coat, often arises in the Head. All of them have an Artery, by which they receive nutriment and augment. They are inclosed within with a peculiar Coat; The Contents are not of one sort, in some I have found a fat, inflammable substance, in many onely a chalky one or mixt with some Serum. Here is a Family subject to this sort of Tumours. If the *Basis* be narrow, they fall off by tying them with a Horse's hair, straitened by degrees, as I have done several times. But if the *Basis* be large and not capable of constriction, I make a long Wound in the Top of it; I squeeze out the Contents, and then apply onely a little Butter of Antimony in Cotton, or mixt with a digestive Liniment to the *Basis*, by which, as by a Stalk, it receives its nourishment: for unless the Stalk be cut off, or eroded, it quickly grows again. I have known such Tumours cut off by rash and unskillfull Chirurges.

Chirurgeons at one slash, and a large Hæmorrhagy follow it, which could scarce be stoppt, till the Patient was much weakned. Butter of Antimony causes no Pain, no Itching, unless the Lips of the capillary Skin be imprudently touched: For the inner Pellicle is void of Sense.

Wepferus.

ter in which red hot Crystal has been quenched (which Strassius, in Theatr. Sympathet. pag. 138. commends) with good success.

Germannus, misc. cur. ann. 72. obs. 44.

Nephriticus Dolor, or, The Stone-colick.
(See Calculus Renum, BOOK III.)

The Contents.

Taking of Laudanum does good. I.
The Efficacy of Mercurius dulcis. II.
When Cassia fistula is good. III.
A spurious, scorbutick Nephritis, how it may be cured. IV.

I. IN the Stone-colick, and Colick from Bile, let Laudanum be mixt in Clysters, and also taken by the Mouth, yet not too often, lest, especially in the latter end of a fit, the morbid matter be concentrated, the humours be incrassated, and rendered immovable, and so the Patient at length yield to the triumphant Intestine Enemy; drowzy Nature being unable to apply the virtue of Medicines to her self, especially of Purgatives; and this happened in the Count de Haut.

Mayerne, MS. de Laudano.

II. Nothing is better in this Disease, than to give Mercurius dulcis once or twice in a just Dose: for it seldom uses to trouble them, who every month take Mercurial Pills; because by this means the Passages are enlarged, and then the Stones are voided.

Hartman.

III. One very necessary thing cannot be passed over, to wit, that Cassia Fistula, which is generally used and indifferently by all men, is not so safe, except the Stomach and first ways be first cleared by Fasting, Vomiting or Purging, since it is a high Diuretick.

Zecchi.

IV. I have often observed that Scorbutick Symptome, which resembles the Stone (of which Dravifius, de Scorbuto, p. 346.) not onely familiar to Scorbuticks but to Hypochondriacks, that is, the Spleen uses to evacuate excrementitious Gravel, or the Tartar of the Hypochondria by the Kidneys: This Tartar usually shews it self in form of a reddish sand, in the sediment of the Urine, at first divided into so subtle Atoms, that it cannot be seen: But it is manifest that its Atoms consist of very sharp Angles, because they stick to the Glass, and cannot be got off without force. Sometimes, when abundance of them come together, the Urine looks bloody: This Gravel settling in the Spleen and parts adjacent, causes Heat: But when it gets into the Kidneys, Ureters, or Bladder, it vellicates these nervous parts with its pointed Atoms, thereby torments them, and causes worse and severer Pains than the Stone it self. These things are accompanied with an intolerable and continual Strangury, partly by the Atoms vellicating the neck of the Bladder, and partly by Urine inclining to Acidity. Hot Diureticks, I find, doe little good, but rather exasperate. Spirit of common Salt, is an effectual Remedy, as also Spirit of Earth-worms. Also Nephritic Essence, drawn off Lignum Nephriticum, with Spirit of common Salt and of Strawberries. For a Vehicle I use Parsly and Nettle-wa-

Nervorum Affectus, or, Diseases of the Nerves.

The Contents.

Wine is hurtfull inwardly and outwardly. I.
Modern Medicines for a Puncture, better than the Old. II.
Oil of Turpentine must be poured in in time. III.

I. I have experienced in my self, that, Wine even outwardly applied, is hurtfull in Diseases of the Nerves. When I came home from Basil, I felt a Coldness all over my Hand; I had a mind to try what Wine would doe outwardly applied in Diseases of Nervous parts. I therefore chafed my hand twice a day for three days with Spirit of Wine; and what did it? The Pain increased, so that for several days I could not stir my little Finger without pain. A Nobleman of Savoy, who had lost the use of his Legs by the Palsie, when he had made a Bath of Herbs, which were very proper, but boiled in Wine, and had used it several days, was taken with a Lethargy, which killed him in three days.

Hildanus.

II. Galen used Euphorbium, the quantity whereof, he himself being Judge, none is able to find, by reason of the various age of the Euphorbium, and the various natures of Mens bodies. But the Moderns have found far safer Medicines, as well chymical, as exotick; yea, and things common among us, that doe their work without Pain, which the strong Medicines of the Ancients were apt to cause, and such as, whether the Nerve be bare or covered, may safely be applied, (whereas to a bare Nerve all the old things could not be applied with safety) As Balsam of Peru, distilled Oil of Turpentine, Tar, Wax, Oil or Balsam of St. John's-wort; in which there are all the qualities that Galen requires, with a Balsamick virtue, which the old want; and the old have also a corroding quality; and the new do not onely waste Excrements, but very much strengthen the innate Heat of the wounded part.

Sennertus.

III. Sometimes Oil of Turpentine will doe no good, when it is applied too late; and then we may hope in vain for a Cure, as it fared about 18 years ago with Theodor. Vander Noen, a Physician and Chirurgeon of Amsterdam; Who having about noon let a pair of Scissers fall out of his Hands, as he was catching them up in haste, he hit the last joint of his right Thumb against the point of them; and because he felt but little pain, he neglected it for several hours; but about ten at night, he felt some small Convulsions in the part that was hurt, and all over his body. He was of a cholerick Complexion, which made him, when he had taken Physick, to vomit it up again, nevertheless, his Convulsions and Pains continued; therefore he called me in the morning and signified to me that he must die; Because he never saw one cured, into whose Wounds that piercing Oil had not been poured at first, which he had neglected, because the Pain was not great. And it happened as he foretold.

Sylvius de le Boë.

A GUIDE TO The Practical Physician.

BOOK XIII.

Of Diseases beginning with the Letter O.

Obesitas, or Corpulency.

The Contents.

*Taken down by drinking Vinegar. I.
What kind of Purging is good? II.
Wasted by a Medical Powder. III.
Their Diet. IV.
One made lean, onely by chewing leaves of Tobacco. V.*

*Strada, de
Bello Belgi-
co.*

I. **C** *Hierapinus Vitellius*, Camp-Master-General, a middle-aged Man, grew so fat, that he was forced to sustain his Belly by a Swathe, which came about his Neck: And observing that he was every day more unfit for the Wars than other, he voluntarily abstained from Wine, and continued to drink Vinegar as long as he lived; upon which his Belly fell, and his Skin hung loose, with which he could wrap himself as with a Doublet. It was observed, that he lost 87 pounds in weight.

II. Left any great mischief should follow, we must try to substract by Medicine; what a spare diet will not; because it has been observed, that a looseness either natural, or procured by Art, does not a little good. But this must be done by degrees and slowly, since it is not safe to disturb so much matter violently, lest it should come all at once. Therefore the best way of Purging is by Pills, of Rheubarb, Aloes, each 2 drachms, Agarick 1 drachm, Cinnamon, yellow Sanders, each half a drachm. Make them up with Syrup of Cichory. They must be taken in this manner; First, 1 Scruple must be given an hour and an half before Meal; then two or three days afterwards, take half a drachm or two scruples before Meal. Thus Purging must be often repeated

at short Intervals, till you think all the cacochymie is removed.

*Fernelius,
Conf. 17.*

III. A certain Goldsmith, who was extreme fat, so that he was ready to be choaked, took the following Powder in his Meat, and so he was cured; Take of Tartar two ounces, Cinnamon three ounces, Ginger one ounce, Sugar four ounces. Make a Powder.

Forestus.

IV. *Horskins* found the things following, to take down fat Men; especially Onions, Garlick, Cresses, Leeks, Seed of Rue, and especially Vinegar of Squills: Let them purge well: Let them Sweat, and purge by Urine: Let them use violent exercise before they eat: Let them endure hunger, want of Sleep and Thirst: Let them Sweat in a Stove, and continue in the Sun. ¶ Let them abstain from Drink between Dinner and Supper: for to drink between Meals makes Men fat.

Idem.

Ferdinandus.

V. I knew a Nobleman so fat, that he could scarce sit on Horse-back, but he was asleep; and he could scarce stir a foot. But now he is able to walk, and his body is come to it self, onely by chewing of Tobacco Leaves, as he affirmed to me. For it is good for Phlegmatick and cold Bodies.

Borellus.

VI. Let *Lingua Avis*, or Ash-Keyes be taken constantly, about one drachm in Wine. According to *Pliny* it cures Hydropical persons, and makes fat people lean.

Ferdinandus.

Obstructiones, or Obstructions.

(See *Aperients*, BOOK XIX.)

Oculorum

Oculorum Affectus, or, Diseases of the Eyes.

The Contents.

- Bloudletting not hurtfull. I.
Great and frequent Evacuations are hurtfull. II.
Wine is the Vehicle of drying Medicines to the Head. III.
Eye-bright is not good for every Disease of the Eyes. IV.
Upon what the Efficacy of a Seton depends? V.

Oculorum Dolor, Inflammatio, Ophthalmia, or, Pain of the Eyes, Inflammation, Bloudshotteffs.

- When the Eyes are ill of a fluxion, where a Caustick must be applied? VI.
In a pertinacious Ophthalmia we must proceed to a Seton in the Occiput. VII.
Where Issues must be made? VIII.
A contumacious Ophthalmia cured by applying an actual Caustery to the swollen Veins of the Eyes. IX.
Boring the Tip of the Ear is good. X.
Whether Purging be always proper? XI.
Topical Medicines must be used circumspectly. XII.

Gutta Serena, Visus Imminutio, or, a Blindness without any visible cause, Diminution of Sight.

- When a Gutta Serena is curable? XIII.
Cured by applying Blisters to the Thighs. XIV.
By fasting. XV.
By a Wound in the Forehead. XVI.
How using Spectacles helps the sight? XVII.

Suffusio, Cataracta, or, a Suffusion, a Cataract.

- The Body must often be purged. XVIII.
One beginning cured by a Topick. XIX.
The efficacy of Pigeon's Bloud. XX.
Cautions about couching a Cataract. XXI.
The way of using purging Pills. XXII.

Macula, Cicatrices, Phlyctæna, &c. or Spots, Scars, Blisters, &c.

- Spots must be distinguished from Scars, because there is no cure for Scars. XXIII.
The Chirurgical Cure of an Albugo. XXIV.

Oculi Procidencia, or, Starting out of the Eye.

- The Starting of the Eye cured by setting a Capping-glass to the hind part of the Head. XXV.
The restitution of the Humours of the Eye lost by a Wound. XXVI.

1. I Have found in my self, that letting of bloud is not hurtfull to the sight: for when I had found my sight troubled for seven years, and I had not let bloud for six months, I opened a vein, and let ten ounces of impure bloud, and as much after dinner, after which I found my sight come to me perfectly. But because the last bloud was feculent: the next day I bled again in the other Arm. And ever after, when I perceived my sight fail me, I presently used that remedy, and I cannot find a more present one.

Botallus.

II. Though most Practitioners do strongly torment the body with many Evacuations, in a Suffusion especially, which they think is a falling down of Water into the eyes; Yet we who have demonstrated that the cause is in the eyes, and that no defluxion can be carried into the Capacity of the eye, do certainly know, that Evacuations doe no good, but only as they keep the body clean. Platerus.

III. Wine is the Vehicle of Drying Medicines to the Head, and is commended by Hippocrates, 6. Aphorism 31. for contumacious fluxions to the eyes, as a thing that is able to attenuate and dissolve the rebellious reliicks of the humours. For which end, Wine, but small, must be prepared for the Table, with Ingredients, in a little Vessel. So that to every Pottle of Wine, there may be two ounces of red Sanders rasped, and one of Rosemary Wood. And in this manner some exiccation of the gross matter, contained in the Head, and strengthening must be attempted. Fortis.

IV. Almost all Botanists in dimness of the Eyes do extoll Wine, wherein some Eye-bright has been steeped, to the Skies. But it is, as its sharp Taste argues, manifestly hot, and because it stops fluxions of the eyes, it is also very probable that it is dry. Therefore we must act circumspectly, and not use Eyebright Wine promiscuously. For we are taught, Sect. 6. Aphorism. 3. That either drinking of Wine, or the Bath, or Bleeding, or Purging, cures Pains of the Eyes. But it is not said, that onely drinking of Wine cures pains of the eyes. So we must reckon, that Eyebright-Wine can dissolve some Mists of the eyes, but not all. Therefore after Camerarius, Hofmannus does learnedly maintain, That Eyebright does not cure any dimness, but onely that which comes of Cold, and not every such dimness, but that which positively comes of Phlegm. For the Taste, which has some bitterness in it, shews it to be a hot and dry Plant. And they make the matter worse, who gather the dry, small and short herb, and either take the juice, or infuse it in strong Wine; Therefore I very much suspect the daily use of the Conserve. Wherefore since Eyebright-Wine is often taken amiss, that is, neglecting Indications, let no Man admire why Lobelius observes, that how much soever some Men commend it, it must not be relied on: for he says, that by drinking it but three months, his Companion had almost lost both his eyes, and was oppressed with fluxions, whereas he had before but a slight Cataphora, and wept a little. S. Paul.

V. A Seton is an excellent thing in diseases of the eyes; First, because the Spinal Marrow enters the first Vertebra, and the Nerves of the eyes come from the Marrow. Secondly, all Membranes are terminated at the Vertebra, but the parts of the eye are Membranous. Nic. Benzonus.

Oculorum Dolor, Inflammatio, Ophthalmia, or Pain of the eyes, Inflammation, Bloudshotteffs.

VI. The external Jugular sends out two branches below the Clavicle, one of which ascends to the lateral parts of the Head, one portion passing behind the Ears, which is dispersed to the forehead and Occiput, above the Temples, in many branches. And Fernelius thought that a serous humour was gathered in those places, because of the Veins, which falling on the parts underneath, creates fluxions in the habit of the body. And the same party thinks, that a Caustick applied to the hollow place, behind the Ear, does more good to them that are ill of a fluxion, than one applied to the forehead, because of a Branch of the Jugular, that runs to the eye. Riolanus.

VII. Whether sometimes also in an Ophthalmia, may we not proceed to a Seton in the hind part of the Head? The affirmative seems probable, because in so doing, the afflux of humours is diverted from the part affected, and so the peccant matter, which feeds the disease long, is subtracted from the place affected. For, since in other cases an Issue draws

draws out the Ichorous Matter, which chiefly offends in the Body, from the more noble Internal parts outwardly to the Skin; and since it is able to correct the preternatural motion thereof to any part, it seems therefore, as if with very good reason it might be used here, that is, when the affluent matter is pertinacious, and after universal Correction of the Plethory, or Cacochymie, it does still stand in need of some strong Revulsion. Setons use to be made in the *Occiput*, says *Gavassetus de nat. Cauter. c. 18.* for revulsion of the Matter, that flows to the eyes, when the *Occipitium* is perforated between the first and second, or, which he approves better of, between the second and third *Vertebra*. But all do not agree in what place it may be properly made, while some think it must be made in the Coronal Suture; others on the contrary rather think it should be made in the *Occipitium*, where the Neck begins, and do demonstrate it by probable reason, since the region of the Neck is directly opposite to the place affected, and the peccant humours do more incline to that place, as being declivous; and an *Ophthalmia* does not so easily return from thence, as from the Coronal Suture: But seeing the place about the beginning of the Neck, between the second and third, or the third and fourth *Vertebra* of the Neck, is not very fit to bear an actual Caution of one hole, therefore Experience rather commends a Seton; when, to wit, the thick skin of the said place is taken up with a Forceps, and a thread is run through it.

Horsius.

VIII. *Avicenna*, *Mesues* and *Albucasis* say, That Issues in the crown of the Head, and the Neck, are very effectual. Let two Issues, says *Rogerus*, be made in the forehead, at the corners of the eyes, or one Issue is made in the Neck, or two between the Neck and the Nose, under the thin part of the Ear. One Man, says *Riverius* in his Observations, was a long time ill of an Inflammation in the *Tunica adnata*, and both Eye-lids; the Disease was not continual but recurrent: Remedies were used in vain. At last I ordered him two Issues between his two Shoulders, and a Cupping-glass to be applied over them both, that is, when the fluxion was upon him; and when he had done this, his eyes were well.

IX. An Oculist in *Paris* got himself great Riches, by applying actual Cauterics to the veins of weak and red eyes. This often succeeded very happily with him, and is taken for a new Remedy, which nevertheless is found in *Hippocrates*, *lib. de Visu*.

Borellus.

X. I will not begrudge my Readers a singular remedy for an *Ophthalmia*, which was communicated to me by a friend; let the lobe of the Ear, on the side affected, be bored through, and put into the hole a long Tent, made of the bark of Spurge Laurel Root, turned and rowled up. The Tent must be let alone there, till the Ear and parts adjoining swell: then the Tent must be moved a little, that the water which is gathered, may run out; When this is drawn out, the Swelling of the Ear will fall, and the *Ophthalmia* will be laid.

T. Bartholinus.

XI. *Hippocrates Aphorism. 17. 6.* commends Purging: And *Galen*, in comment. And this is one Example of those things, which are evacuated spontaneously and beneficially, which the Physician must imitate. Reason and Experience agree with it, because Inflammations and Pains of the eyes are caused by very sharp and salt humours, which must be carried off from the eyes by Purging; and it has usually good success. On the contrary, one would think Purging should be rejected, because Blood, not Cacochymie offends, the redness and inflammation are witnesses. Therefore *Hippocrates*, 2. *Epid. Sect. 2. tract. 18.* says; Bloodletting cures a Quinsie and Bleer-eyedness. Besides, Purges disturb and put the Humours in Motion; and drive them into the weak parts, which are inflamed, or in pain. For a Solution, we must know, that an *Ophthalmia*, or a pain in the eyes comes either from a Defluxion, or a Gathering. When Humours come from the Head, or the Parts underneath, and from

the whole Body, both the Head and the whole Body must be Purged. Therefore *Hippocrates*, *lib. de Visu*, says; Purging of the Head and the lower Belly is good for an annual and epidemical Bleer-eyedness. For such an one indicates, that there is matter continually sent from a Cacochymie, either in the whole, or in the Head, whence arise the ends of Purging; But when there is only a Plethora, Blood must be let, according to *Hippocrates* his advice in the same place. For some such pains letting of blood is good, if the body abound with Blood. But where the Disease comes from a Gathering, Purges do plainly harm, and not good: for the eyes are weakened by them, and through weakness their proper aliment degenerates into a bad juice. And we may very well say, that such Diseases of the eyes, as are effects only of an Intemperature and plenitude of the Head, are irritated by Purges, and the greater share of the fluent Humour runs to the eyes: For the Brain sometimes uses the eyes as its proper Emunctories, to purge it self, which, if they be disaffected, do readily receive the Excrement. But when the mischief arises from the Bowels below, and from the impurity of the Belly, it is safe to give a Purge. Moreover, you may not be much out, if you say, *Hippocrates*, in his *Aphorisms*, spoke of gentle Medicines, and a spontaneous looseness; But in other places, of strong Elaterick Medicines, which with their acrimony and heat hurt the eyes.

XII. Indications for applying of Local Medicines are taken chiefly from the place affected: For the laxity of the part, the sensibility, aptitude to suffer, sympathy and vicinity, especially of the pupil and humours of the eyes, all these things will not permit us to apply any thing that is violently repercussive or resolvable. For things that are too bitter and astringent, though they be highly repercussive; yet they irritate and exasperate these parts of the eye, and cause greater pain: And such things as are over-hot and sharp do resolve indeed powerfully, but they increase the Inflammation, and exterminate the part from the proper temperature of the eyes. Therefore things moderate in each faculty must be applied, both in repelling and dissolving. Repellents must be such, as by their excessive Coldness and Astringency may not condense the Coats of the eyes, and shut the pores; nor such as may exasperate the eyes by their dryness, nor such as may increase pain upon either score. Therefore let Lenients be mixt with cold and astringent things, as Milk, Saffron, *Sarcocolla*. The same things must not be over-tough, lest they grow hard and clammy, and stick too close to the eyes: And therefore though the White of an Egg beaten up with Rose-water, or the like, be a most proper remedy to repel; yet we must see that we mix nothing with it, to make it hard and stick to the eyes. Let Medicines also, which are put in the eyes, be carefully cleansed from their filth, and very finely powdered and sifted, that no asperity may be in them, nor biting. Therefore, if their biting depend upon heat, let them be often infused in water of Roses, Endive, Barly, or Womans Milk: If upon coldness, let them be infused in a decoction of Raisins, Fe-Sennertus, nugreek or Melilot, with sweet Wine.

Montanus.

Gutta Serena, *Visus Imminutio*, or a Blindness without any visible cause, Diminution of Sight.

XIII. If this Disease come of Humours gathered in the fore-part of the Brain, which compresses the Nerve, it may the more easily be cured; So *Hildanus*, *cent. 5. obs. 19.* reports, how a certain Man lost his Sight by a Vomit, who was cured by taking another. For the Humours were driven to the Optick Nerves by the first, and were removed by the second. The easiness of the Cure shewed, the matter was not fixt in the substance of the Nerve, but only lay on the outside of it.

XIV. A

XIV. A malignant Vapour from the Womb cast a Woman with Child into such bitter Contractions of the Nerves, that she was delivered, and knew it not; Besides, she lost her Sight, though there was no fault to be seen in the outer Coat of the eye, which could never be cured without effectual remedies, of all which Velicatories applied to the inside of her Thighs, did her most good; by means whereof, the blood, that tended upwards, was drawn down so effectually, that she escaped Blindness.

Tulpius.

XV. A young Woman fell into a *Gutta Serena*; She resolved to fast her self to death, and would take nothing but what her Husband forced her to take. She persisted in this condition for a year, and was made very lean, her innate heat, for want of food, feeding upon her natural moisture, and on that moisture also, which caused the *Gutta Serena*. So the Patient recovered her Sight, and recovered by a restorative Diet.

Formis.

XVI. We read, how some Blind Men have recovered their sight, and that suddenly by a Wound transverse the Forehead; some by a loofness coming suddenly. The cause was nothing but a compression of the Optick Nerves by the Vessels near them, that is, by the Veins and Arteries being swelled with Blood, which were emptied by the Wound. Wherefore sometimes, and with very good success, in the Blindness, which they call *Gutta Serena*, I open the middle vein in the Forehead, and let it bleed, as long as it will.

Spigelius.

XVII. I am of *Platerus* his opinion, who thinks, that hurts of the Sight, which are commonly ascribed to some fault in the Spirits, may rather be ascribed to the ill Site of the Crystalline Humour, or some faults in the other humours; which often happen in young Men, in whom there is no fault or want of Spirits to be seen, and such faults may be amended by help of Spectacles, which could not be, if this proceeded from any fault in the Spirits: for how can Spectacles ever amend any fault in the Spirits? For since the *Cornea Tunica*, as also all the Humours, are made for admission and refraction of visible Spirits, if they offend in Sight, or any other way, this refraction cannot be duly made, which may be amended by Spectacles: So also we may observe, that they who are otherwise well, do see very little things at a distance by help of Spectacles; which comes to pass, because of the peculiar refractions of the visible Species, but by no means because of the Spirits, which Spectacles can neither make clearer, nor more plentiful.

Sennertius.

Suffusio, *Cataracta*, or a Suffusion, a Cataract.

XVIII. They that are troubled with this Disease, are always in a manner costive: Therefore they must be kept loose with Suppositories, Pills, or laxative Diet. *Galen* affirms, he has cured several by prescribing *Hiera picra*, onely by way of Epistle. But Pills must be made without Saffron or Myrrhe, or but with a very small quantity of them.

Rondeletius.

XIX. There are many descriptions of Collyries for the discussion of Cataracts in the beginning. I have experienced the Gall of a Pike-fish, mixt with a little Sugar (after Purging and a Blister behind the left Ear) dropt into the left Eye of my Nephew. In a week it dissolved the Suffusion that was beginning. *Adrianus Spigelius* used this Gall with great success.

Scultetus.

XX. Many commend Pigeon's Blood dropt warm into the eye: for the part is much strengthened with the innate heat of the Animal, and the excrementitious humour is dissolved. But because this heat is soon spent in the Blood; it would be much more proper to take a young Pigeon, before it be feathered, and to split it in the Back, and apply it to the eyes.

Idem.

XXI. One may know it is safely couched, when

in turning of the eye the couched pellicle does not appear; and that the Cataract couched may not return, we must have a great care we do not tear it into several parts: for several pieces, though couched, will rise again and hinder the Sight. ¶ Observe, that all the *Tunica Cornea* is covered with a very thin Membrane, which must be forced into Wrinkles, before the *Cornea* is pierced (beginning at the outer corner, when you would couch the concrete humour, which is in the Watry Humour) lest the Watry Humour should run out; after taking out of the Needle. *M. Valentin*, a great Oculist, observed this.

Heurnius.

XXII. A Suffusion has its rise from viscid Phlegm, commonly called Melancholy, attenuated and mixt with the blood, and carried together with it by the Arteries to the eyes, sticking especially in the Watry Humour, and darkning it, till it increasing more and more, and congealing whereabouts the *Uvea* makes the Pupill, it hinders the passage of the visible Species in whole or in part. This said viscid Phlegm will be removed by Phlegmagogues, both common and Chymical, especially *Mercury* any way well prepared. For Example, these following Pills may be prescribed, which serve divers Indications; Take of Gum *Galbanum* prepared, with Vinegar of Squills one drachm, choice Mastick half a drachm, the best Castor, red Myrrhe each one scruple, white *Carabe* fifteen grains, Saffron half a Scruple, *Aloe Rosata* half a drachm, Trochisks of *Alhandal* one scruple, distilled Oil of Fenil six drops. Mix them. Make fifteen Pills and gild them. Let the Patient take 3, 4, or 5 of these every other day, an hour or two after a light Supper, so that he may have a stool the next day.

Sylvius dele Boë.

Macula, *Cicatrices*, *Phlyctena*, &c. or Spots, Scars, Blisters, &c.

XXIII. We must observe what *Gordonius* admonishes us of, that Scars happen in the *Cornea* after the Cure of Ulcers, and they are all white; wherefore they seem and are taken to be Spots. And when Physicians are called, they labour to cure them, as if they were Spots; but they labour in vain: for Scars can never be abolished. Others, on the contrary, no sooner see a Spot, but they take it for a Scar. Both are deceived, and we must let a Scar alone, except onely for beauty: But you may have hopes of clearing a Spot or *Albugo* by Medicines.

Plempius.

XXIV. An *Albugo* is a Scar which is left in the black of the Eye after a Pustule or Ulcer; which when it is deeper than a superficial cloud, Physicians commonly try to cure it in vain with Medicines, because they are either too weak, or too strong; so that they gather the humours, and settle them there when gathered: Therefore if the Chirurgion have a gentle and light hand, and the Scar come not of a Wound, it is best to scrape it off with a very sharp Penknife.

Severinus.

Oculi Procidencia, or, Starting out of the Eye.

XXV. *A. de Aldrighetis* could find no better Remedy for the Starting of the Eye, than setting of a large Cupping-glass, without Scarification, to the hind part of the Head. One by a blow had his Eye struck out of its Orbit, which a Physician of *Constantinople* got into its place again this way, as by a Divine Hand.

Rhodius.

XXVI. It happened, as two Sisters were playing together after Dinner, the younger lifting up the elder Sister's hand hastily, as she was sewing, that she struck the Needle into the midst of the Sight of her Eye. When I was called, I observed, that the watry humour, and part of the vitreous, was run out. About four of the clock in the afternoon I applied to the swollen Eye the Juice of Elm-

E e e

bladders,

bladders; I ordered about midnight that the linen Cloth, that was to be applied, if it should be dry, should be wet in more of the Juice; in the morning, I call GOD to witness, I found her well, but the Sight of her Eye was lost: And now, though it be twenty years since, you cannot tell which Eye is blind by looking on them.

Heers.

Oris Affectus, or, Diseases of the Mouth.

(See Aphthæ, BOOK I. and Infantum Affectus, BOOK IX.)

THE falling down of the Palate is omitted by Physicians, a Disease no less dangerous than rare. It comes from a distillation of an humour, which so depresses the Muscles at the end of the Palate, that they are ready to stop the passage of the Wind both by the Mouth and Nose. This straitness kills a Man presently, unless you immediately lance it, and by letting out the humour make way for Breathing. I saw once a Swelling arise in the Palate so quickly, that one had not time to think of a Gargarism, nor of any other Remedies, except onely of cutting with a Penknife, which being done dextrously and quickly at that time, I saw not onely much Water run out, but when the Swelling of the Palate was gone, the Man who was just dying, came to himself.

Tulpius.

Ossium Affectus, or, Diseases of the Bones.

The Contents.

With what Exsquamation must be performed? I.
The Cure of a Caries following the Pox is difficult. II.
The Excellency of Euphorbium, to correct a Caries. III.
Bared Bones do not always contract a Caries. IV.
The Causes and Cure of a Spina Ventosa. V.
The Cure of an ulcerous Hyperfarcosis. VI.
The Cure of a Cancer of the Bone. VII.

I. BONES must exsquamate and be taken out, when they are corrupt, or after Burning. Powders are made of Sarcoticks, as Myrrhe, All-heal, Frankincense, adding some things which are reckoned to have the property to draw Bones, as Root of Reeds, which draws out Thorns and Splinters; Some also add Pine-bark, but without either judgment or reason; for this Powder is usefull and effectual sometimes indeed, as in Bones, which consist of a rare substance, or of two Tables, such as the *Os Cranii*, the *Os Coxendicis*, and the *Os Sacrum*: for they have Veins within, wherefore they draw Flesh out of these Bones. But in thicker and solid Bones they are not so commendable, because Flesh cannot be bred in the inside of them. Therefore drier Medicines must be sought, which have an eviscerating faculty, as Powder made of Agarick, Tartar and Bone Ashes: for such a Powder, because of the Agarick, draws out the Humour that lies within and corrupts the Bones, because of the Heat it has, and the faculty to draw Phlegm. Besides, Lees of Wine burnt, do by their Heat and great Driness sever the sick parts from the sound, especially in corruption of the Bones by the Pox.

II. A Caries of the Bones, an usual Symptom of the Pox, is difficult to cure: The difficulty arises hence, because the Venereal Poison intimately in-

sinuates it self into the Bones, whither Medicines that are proper to correct it cannot reach; and the Disease cannot easily be conquered with Fire or an actual Cautey. It is well known that an Acid (and we reckon the Venereal Poison consists in a sharp Acidity, and that it is most penetrating) does most closely insinuate it self into the Bones, and corrupt them even to Death; for Bones do truly live, and therefore such as are corrupted with a Caries, must be reckoned for dead. Therefore for the Cure of a Caries it is necessary, that all the part affected, as being dead, be separated from the sound and living, with which the Caries can neither close nor long subsist, but it will infect the same, and by little and little bring it to the like corruption. But it is hard, either by Fire or by a red hot Iron, or by convenient Medicines, to separate the carious part of the Bone from the sound, when the Venereal Poison had made holes in the Bone; and the farther it eats, the stronger it grows; as it is plain in a Venereal Caries, which is the reason that it stops not at a Bone, which corrupts, but daily grows sharper, whereupon at length, when it is arrived at the height, the Venereal Caries grows incurable. And all the difficulty lies here, that usually proper Remedies cannot be conveniently used and applied: for the parts near the Bone, as the Membranes, Tendons, Nerves, &c. are often hurt by an actual Cautey. And this Malady increases, because actual Cauteyries, which doe little good at once applying, must be often applied, if they will doe any great matters, other Remedies are either too weak, or cannot penetrate sufficiently to all the places, where the said Poison has insinuated it self, which consists in a sharp Acidity, and is very penetrating. For whatever things yet have been found to take off the Acrimony of an Acid any way, are either lixivial Salts, both fixt and volatile, or volatile Spirits, or Oil, or Watry things, or some things compounded of them. But fixt lixivial Salts, which are the chief opposites and adversaries of an Acid, if they be pure and alone, will stay at the superficies, and will doe nothing of moment; and if they be diluted with water, they will lose some of their virtue. If they be joined with a volatile Spirit, they will penetrate indeed the better, but they will operate more weakly. If they be made into a Soap with Oil, they are weakened, and cannot easily penetrate deep in, and if Water be added, to make them more penetrable, they are made more dull. No wonder therefore if a Venereal Caries of the Bones be seldom cured.

Sylvius de le Boë.

III. In curing of Ulcers a Chirurgion meets with nothing that creates him more trouble, and puzzles him more than when an Ulcer is accompanied with a Caries of the Bones, especially if it be deep, because of the Moisture in the Bone. And for the drying up of this Moisture, and for making the Bone to scale, Physicians and Chirurgions both ancient and modern could think of nothing better than an actual Cautey; I allow Euphorbium the next place, since it not onely dries up the Humours in the Bone, because it is sharp and hot in the fourth degree, but it seems to be proper here by an occult quality.

Hildanus.

IV. I have observed some Physicians and Chirurgions, and those no ordinary ones, who were of opinion, that Flesh can never grow upon Bones, that are made bare in green Wounds, unless the surface of the Bones scaled by the benefit of Nature and Medicines. Wherefore whenever they meet with a Wound where the Bone was laid bare, they scraped it with *Scalpra* till the blood come for several days; then they applied sharp Medicines, as Oil of Sulphur, Vitriol, *Aqua fortis*, and the like, and therefore of a simple Ulcer, they often made a malignant one, as we may see in rotten Teeth. And though the Air be stark naught for bared

Bones;

Idem.

Bones; yet it does not follow, that they are always altered and corrupted by it, especially if the Chirurgeon be carefull, and use no sharp thing. ¶ Hippocrates, Aph. 6. 46. says, that in all annual Ulcers, the Bone must of necessity corrupt: for because such are malignant, therefore the Flesh and the very Bone must of necessity corrupt. This is often observed in the Pox, Small-pox, and other putrid Abscesses: for when the Bones are made bare by such causes, for the most part they are corrupted before the Flesh and the Skin are ulcerated (as I have often observed) nor will the Wound close up till the Caries of the Bone is removed. And that it may very well be, if the Lips of the Ulcer be kept open with prepared Sponge, and if Powder of *Euphorbium* be firewed on every day. I have several times cured a Caries of the Bone, when it has not scaled. For *Euphorbium* rectifies the Bone by degrees, and all that is carious runs out with the Pus. I found this in a Girl, who after the Small-pox had a huge Abscess in her left Arm; when it was opened, the Bone was found to be carious: In one part of the Ulcer, where the Caries was deep the Bone scaled by the benefit of Nature and *Euphorbium*, and Nature insensibly corrected the rest, so that she perfectly recovered.

Idem.

V. I am resolved to treat of the Cure of a *Spina ventrosa*, because no Authour has made it his business to explain it. The matter of this Disease is Phlegm. The place affected always the Joints, never the places between the Joints primarily; which if they ever be affected, it is by Sympathy. This is the way of its generation. If Phlegm, designed for the Nutrition of the Bones, putrefie or grow sharp, first it corrupts the Bones, without any pain, and then the *Periosteum* after the Bones. A sign of it is a cutting, sharp and pricking Pain; so that the Patient says he is as it were prickt with a Thorn: whence the Disease is called *Spina*. And while the Patient is vexed with this Pain, and the *Periosteum* is eroding, there is no Swelling, as then. But when the Bone is first corrupted, and after that the *Periosteum*, the Pituinous Matter, having a free passage into the fleshy parts, causes a Swelling in the Joint, at first soft and lax, and without Pain, of the same colour with the Skin, which being laid open, grows harder, because more humours flow thither; the thinner part of which exhales, and the thick remains, out of which there comes a serous matter, and the Bone appears to be corrupt by a Probe. I have observed both Men and Women are subject to this Disease till they are twenty five years old, not elder, unless it took them before and was not then cured. The Pathognomick Signs are, Pains at first like the pricking of a Thorn, the Joints being affected, Youth, a soft, lax tumour, which gaping, pours out a Serosity, and if any Pus come out, it is bred of the carious parts. The Disease is hard to cure, both because of the constant Conflux of Matter, and the Corruption of the Bone, which, the worse it is, the more difficult the Cure. One beginning is easilier cured than an old one, but it will never be cured, till the Fluxion is removed, and till all the corrupt Bone is taken away, either by Fire or the Knife. As to the Cure, as soon as ever the Patient feels a pricking Pain, like a Thorn, in the Joints of his Hands or Feet, in his Armes or Knees, though this be rare, or in his Ankles, presently, though no Swelling appear, it must be cut, from which we must not take away our Probe, till we find the unevenness of the Bone, which is a sign that the *Periosteum* is corrupt. Then the first Indication is, to remove the Caries of the Bone, namely, to scrape it off, without which neither Ulcers nor Wounds can be healed. When the Caries is removed, Flesh must be bred, and then it must be cicatrized after the usual way. But if by reason of the depth of the place, abraforay Instruments cannot be got in, we

must burn with actual Fire. When therefore the hole is dilated, by Section, prepared Sponge, Gentian-root; or Pith of Elder, an Iron Pipe must be put into it: then the corrupted Bone must be burnt with a hot Iron, till the skilfull Artist thinks it will separate quickly, then you must prosecute the rest of the Cure as before. But because it sometime happens that the whole space between two Joints is corrupt in a Finger or Toe, especially in Children, in this case neither Fire nor the Knife will doe: but in their stead we must use a small Trepan, and bore it in the middle, from which with Scissers made neatly for the purpose, the sides must be cut off, and the whole *Internodium* must by little and little be taken away with a *Vossella*; and the empty place in time is filled with Flesh, which in Children grows hard and serves instead of a Bone: though when the whole *Internodium* is taken away, the Finger is shortened, because the Muscles are drawn to their Head, and the Softness of the Flesh gives way. Now if a Physician be called, when Solution of Unity is made by the pituinous Matter, grown sharp by putrefaction, the whole Cure must be directed to the removing of the corrupt Bone, by the Contrivances and Cure before proposed; in which sometimes two, three or more small Bones are taken out. But in scraping, burning or taking out a Bone, we must take heed not to hurt the Tendons, for fear of Convulsions. This is the topical Cure of this Disease, whereto must be premised the Care of the whole body by Medicines that purge Phlegm; yea, by giving a Decoction of *China*, *Sassa*, *Guaiacum*, and the like, to dry. Marchetti.

VI. Bones are subject to several Diseases, especially to a Caries, which, because it is bred divers ways, These ways deserve notice. Preternatural Humours, upon whatever cause, whether special or general, they penetrate the bone, sometimes they cause an Ulcerous *Hypersarcoma*, with moistness of the Bone; sometimes they produce a Cancer of the Bone, or a *Spina Ventrosa*, which are Diseases, that must necessarily be distinguished. And because no Physician has designedly described them, I have a mind to communicate, what Reason and Experience have taught me; The cause of an Ulcerous *Hypersarcoma*, with a moistness of the Bone is Preternatural Phlegm, which taking away the temper and hardness of the Bones, the Flesh cannot be sustained by this soft foundation, whereupon it loses its natural consistence: its constant nutriment from the blood turns to a soft and spongy *Sarcoma*; this by degrees increases, and at length Ulcerates, whereby the Tendons, Ligaments and Nerves are corrupted, and the whole Limb is endangered. In this case you can doe no good with Medicines, till you come to the ground of all, the Bone; for when the Bone is cured, presently the Ulcer will be cured, and the Flesh will come to its self. Here is occasion therefore for deep Incision to come at the Bone: But if the excrescence be too big, extirpate it: If you find it grow again, apply a flat actual Cautery, having ever regard to the Bone. Barbetter.

VII. The cause of a Cancer in a Bone is a sharp Humour, corrupting first the Bone, and then the *Periosteum*. Here is an Ulcer both of the flesh and skin, which cannot be cured, till you have first cured the Bone. The hole of the Ulcer is very small, the lips are pale, the flesh is soft and a little swelled; but it does not grow again of it self, as we said in an Ulcerous *Hypersarcoma*, and here we must cut to the very Bone lengthways, and then apply things to correct the corruption, as *Euphorbium*, Spirit of Vitriol mixt with Spirit of Wine, &c. The Powder of Turpentine boiled, till it is hard, is excellent in this case, mixt with *Ungu. Fel. Wurtz.* or *Aegyptiacum*. An actual Cautery is also sometimes necessary. The cure is hastned also, when, instead of a tent of Lint, Pith of Elder is used, because this imbibes the sharp and thin Humours, and so

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an opportunity is afforded to Nature for doing her work more commodiously. And since these Diseases do usually depend most upon an intemperature of the mass of Blood, so that when one *Cancer* is almost cured, another arises in another place, Medicines are very necessary to help the whole Body, which the following things will doe; Take of Root of Comfrey, Osmund Royal, China, *Sassa*, each one ounce, Bark of *Guajacum* shaven two ounces, best Rheubarb six drachms, clean *Senna* 10

drachms, light Agarick 6 drachms, Cloves one drachm, Cinnamon two drachms. Make an Infusion twenty four hours in a sufficient quantity of Barly-water warm. Boil them on a gentle fire; to four pounds of it strained out; add of *Syr. de Symp. Fernelii* four drachms. Mix them. Make an Apozeme. The Dose, three, four or five ounces. It will Purge gently, promote the Cure, and prevent a Relapse.

Idem.

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GUIDE

TO THE

Practical Physician.

BOOK XIV.

Of Diseases beginning with the Letter P.

Palpebrarum Vitia, or Diseases of the Eye-lids.

The Contents.

When the Eye-lids are wounded, the parts adjoining must not be anointed with the Oyl of Roses. I.

With what cautions Tubercles growing thereon, must be cured? II.

A Hare-Eye must be treated with caution. III.

In the falling down, Contraction, &c. how Section must be made? IV.

The Cure of Warts. V.

The Cure of a Ptilosis by pricking. VI.

The Cure of an Entropium by Scarification and Section. VII.

I. **W**hen these parts are wounded, Chirurgeons do use, and they do well, to anoint the part all over with Oyl of Roses, that they may prevent Inflammation. Nevertheless, when the Eye-lids are wounded, the parts thereabout must either not at all, or exceeding cautiously be anointed with Oyl of Roses, as *Aquapendent* well advises, lest the Oyl fall into the Eye and inflame it:

for Oyls are great enemies to the Eyes; but rather a Linnen Cloth wet in an austere black Wine, and strained out, should be applied.

II. Writers recite good and proper Remedies in the *Hordeolum*, *Grando*, Stone and Wart of the Eyes; but *Galen's* Rule (which few take notice of) *Com. 2. in lib. 6. Hippocr. de morb. popul.* must be observed concerning them, to wit, that these Tubercles be first exasperated with the Shell of a Cuttle-Fish, or a Pumice-Stone, or with our Nails, and then we must lay on some Detractory Medicines: And the reason why we do so is, that the Ulcerated Tubercles may receive the virtue of the Medicines deep into them; a thing, which, if you be wise, you will observe not only in hard Tubercles of the Eye-lids, but also of any other part.

III. *Parvus*, lib. 16. c. 6. shewing the cure of a Hare-Eye, bids us have a special care, lest in administration of the Section the Cartilaginous edge of the Eye-lid be hurt. For, when that is cut in sunder, he says, we may endeavour in vain to elevate the Eye-lid. But what has this Cartilaginous edge to do with the elevation of the Eye-lid? Cut it boldly, and cut it through again; if you do not divide the right Muscle of the *Palpebra* transverse, you will not hurt the elevation of the *Palpebra*. His Predecessor *Guido* expressed himself more to the purpose, and with better skill, *Avoid as much* *idem ibid.* as you can the Ciliary Rimb, for if it be hurt, it is very

Plempias
Ophthal.
mogr. l. 5.
c. 1.

very hard to cure. This is very true, because of its Cartilaginous Nature.

IV. Authors practise Section of the Eye-lids in the falling of them down and laxity, in their contracture, as in a Hare-Eye, in Tubercles, Warts, *Mori*, *Grandines*, &c. In which Diseases they always, and without any distinction, order Section to be made according to the duct of the Wrinkles of the *Palpebra*. But a distinction must of necessity be made: For if the foresaid Tubercles rise upon the Skin or the External Circular Muscle, we must in Section follow the duct of the Wrinkles in the *Palpebra*, for that is the process of the Fibres in the Circular Muscle. You must use the same Surgery in a Hare-Eye, whose Cause has been a Cicatrice: Where we must take special care, that in cutting we do not force the Instrument deep, so as to hurt the right Muscle lying underneath, which being hurt, the elevation of the Eye-lid perishes. On the contrary, if the Tubercles possess the inner *Superficies* of the Eye-lids, because the long, right, descending Muscle has its seat there from the Eye-brows downwards, the Section must be administered conformable thereto, having again especial care that we force not the Knife too deep, and cut through the Circular Muscle, the transverse Section whereof causes an abolition of the shutting of the Eye. As for the under Eye-lid, it consists of one only Muscle, namely, that same Circular one which is found in the upper: Therefore a Lunar Section has only place in it, so as the Horns are turned not to the Jaw, but to the Eye; for there is the progress of the Fibres of the Muscle. But from the transverse Wounds of the Eye-lids, all that profess Surgery do unanimously predict the fall of them, and the abolition of their Elevation: And all Wounds are called Transverse by these Men, which pass from one corner towards the other. Therefore they assert, that if a Wound descend from the Eye-brow downwards, and cut the *Palpebra*, abolition of the elevation of the *Palpebra* does inevitably follow. But Anatomy tells me otherwise; Because therefore the Circular Muscle, which encompasses both Eye-lids, exercises the shutting the Eye as its proper action, an abolition of the shutting of the Eye follows the Transverse Section of its Fibres, therefore a Wound inflicted from the Eye-brows downwards hinders the shutting, not the opening of the Eyes: for by such a Wound the Fibres of the Recludent or Elevating Muscle lying within are not cut asunder. Besides, a straight Wound, (say they) that is, proceeding from one corner of the Eye towards the other, has no danger in it, and portends no inconvenience, because the duct of the Wound follows the rectitude of the Fibres in the Palpebral Muscle: They say true, indeed, if the Wound only hurt the Superior Circular Muscle; but if it reach deep, so as to cut through the Inferior, or Internal Right Muscle, then it will do no small harm, that is, it will cause a falling down of the Eye-lid, because the Fibres of the Elevator Muscle are cut across.

Idem.

V. Physicians, that are flatterers and soothers of Diseases, do not so much as touch, much less cut off Warts of the Eye-lids. But *J. C. Arantius l. de tum. c. 20.* clips them with Scissors, and wets them with Plantain Water, ringed with Alum, that they may not grow again, and that they may the sooner Cicatrize. I can aver this upon my Experience, that I took off such a Wart as this, which hung down from the middle of the Eye-lid, and hindered the sight of the Eye, by running a Needle and a Thread through it, and taking both ends of the Thread, and drawing it up a little, I cut it out by the Roots with a sharp Pen-Knife, and anointed it with a little Oyl of Sulphur. The Man had had it Twenty years, and still the Physicians had dissuaded him from meddling with it, though it put him to continual trouble.

Serapin.
Med. Eff. p.
123.

VI. *Prilosis* is a callous, red thickness of the Eye-lids, often accompanied with the falling off of the Hair; a contumacious and tedious Ail, the Cure whereof I once experienced by pricking of the little Veins in the outside of the Eye-lid, which rise as it were into *Varices*; and many others came to me, whom I always cured the same way. Among the rest, a Religious Man, who for six months could find no benefit by any Medicines, was thus quickly cured, that is, by frequent pricking with a Needle. *Idem, p. 791*

VII. I have often cured an *Ectropium* by Scarification. And an *Ectropium*, according to Celsus, is a fault in the upper Eye-lid, which turns up a little, and comes not down far enough to shut; or in the lower Eye-lid, which is not drawn high enough, but turns back and hangs down, and cannot joyn with the upper. And both are caused by some inward Disease, and by a Scar, and this not without defect in the Eye-lid, which if it be too defective, says Celsus, no Cure can restore it. So He indeed, but I found that an Eye-lid inverted after the Cure of a Carbuncle; so that all the lower Sinus of the Eye lay much open, was amended by cutting the Circle of the Deglabrated Eye-lid; And this happened to a Capuchine, who by such cutting recovered the beauty of his Eye almost entirely, who had been despaired of by the Surgeons.

Idem

Palpitatio Cordis, or the Palpitation of the Heart.

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Where Blood must be let. II.

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III.

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VI.

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I. Although oftentimes Wind be found in this Malady, yet because there may be Wind in a Spurious Palpitation, which proceeds from the heat of Blood, or inundation of the Pericardium, it is not safe at the first coming of it, to apply hot things. Wherefore, if the mischief arise from the heat of Blood first of all, according to Galen's Opinion, Blood must be let. In them, who labour of an Inundation of the Pericardium, never, unless very sparingly and seldom; only that what oppresses the Spirits of the Heart may be moderately subtracted, and that the Fever (which perhaps for want of convenient Ventilation increases) may not gain ground, and I think this is what

what must chiefly be done in a Spurious one. *Mercatus* thinks Blood-letting hurtful, because its Inducant, namely abundance of Blood, does not at that present offend: For who will affirm, that Flatulent Matter, which is the immediate cause of this Affection, can be taken away by Blood-letting? Yet *Galen*, 5. *loc. aff. c. 2.* intimates the contrary, when he affirms, that all who are ill of a Palpitation of the Heart, are cured by bleeding and attenuating Food and Physick. Which Tenet is not without reason; for when abundance of Blood is in fault, it indicates plentiful detraction, lest the Spirits be suffocated. But if there be no great Plenitude, yet Bleeding is convenient, because the Disease in respect of the part affected is great: for a principal part is affected, where we must take care by Revulsion, that abundance of Humours do not run more to the Heart, which is otherwise debilitated.

II. The Palpitation of the Heart, as is very apparent to me, is usually caused by a Melancholick Humour, (that is, by consent with the *Hypochondria* in Splenetick Persons.) wherefore I always did my Patients a great deal of good by setting Leeches to the Hemorrhoid Veins.

III. When in time of the Fit the strength is not able to bear Bleeding, we must use Leeches and Cupping-Glasses. As for the place, *Rhases*, 7. *cons.* applies Cupping-Glasses to the Back. *Avicenna* disapproves them, because they raise Palpitation, by drawing the Blood to the Breast. This contradiction is thus taken away; Cupping-Glasses in Plenitude of the whole, applied to the Back with much flame and deep Scarification, especially if they be large, use to raise this Tremulous affection of the Heart: Therefore in this case they must be set to the lower parts. But when the Body is evacuated by Medicines and Bleeding, small Cupping-Glasses, gentle Scarification, with a little Flame, applied to the Back, do good; for they draw the Vapour, Wind, and Blood from the Center to the Circumference.

IV. For Revulsion of the Matter in a tedious and frequent one, Issues and Blisters, either in the Arms, if the Matter fall from the Head; or in the Legs, if it be essential, or transmitted from the lower parts to the Heart, are good. Concerning Vesicatories *Mercurialis* cautions us, not to use *Cantbarides*, because they have a faculty malignant and adverse to the Heart, but rather Crow's Foot, *Flammula Jovis*, &c.

V. Where the Matter is sanguine, almost all agree in this, that Extenuating Syrups should be given: Being swayed by *Galen's* Testimony, 5. *de loc. aff. 2.* who treats a Palpitation with Blood-letting and Extenuating Medicines. And they take their Matter for Extenuaters from *Lib. de Palpit. c. 5.* where he reckons up all hot Medicines, endued with an Attenuant virtue, Penny-royal, Calamint, &c. This Operation is to me suspected, yea, dangerous; seeing Wind may be bred of a hot cause, where Cacoehymie or Plenitude is. The place is in *Galen*, 4. *acut. 9.* For if hot Attenuants be given in abundance of Blood, Wind and Vapours will be raised, and they will increase the Palpitation. Therefore Attenuants may be chosen, but they must be cooling, as *Pisane*, *Oxymel*, *Syrupus acetosus simplex*, *acetosatus Citri*, &c. And I believe *Galen*, 5. *de loc. aff.* must be understood of Attenuating Meats and Diet, not of Attenuating Medicines, but of true Extenuaters. And such are they, which diminish Blood, either of themselves, or by accident. Of themselves *Vena-Section* and all Evacuation of Blood; All Purging by Vomit or Stool, Sweat, or Urine, diminish Blood: By accident, a spare Diet, Labour, Friction, Bathing. The place is in *Galen* 2. *aphor. 28.* where under the name of Attenuating Medicines all these things are understood; And truly in abundance of Blood it is good to extenuate, that is, to let Blood and diminish it.

VI. *L. Septalius*, lib. 6. *animad. 117.* forbids Diureticks in the Palpitation of the Heart, if thick Blood offend, because they exhaust the Serum of the Blood, and make it thicker. But when it arises from a watry and ferous Humour, there is nothing that can more easily conquer the violence of this Disease.

VII. Although we must presently relieve the Heart, as a principal part, by such things as have a singular virtue to encrease its strength, and to discuss the malignity of the Vapours, such as are most sweet scented and Aromatick things, which by their Balsamick virtue defend the innate heat of the Heart, and by their heat discuss and waite the Vaporous Matter. Yet if the Womb be the cause of the Palpitation, we must abstain from them, the Diseased Constitution of the Womb forbidding it. For such things presently cause Fits, and then the Palpitation is greater. For when the Brain is refreshed with sweet scents, by the sympathy which is between it and the Womb, if this be morbid, the latent Vapours are raised, which fly to the principal parts, especially to the Heart. Therefore we should rather fly to those things, which have the faculty of discussing that vapid Substance, such as some fetid and strong smelling things, which by their inimicous quality excite the expulsive faculty to cast out what is noxious. Besides, they have a virtue to attenuate and violently to dissipate, as appears in *Castor*, *Galbanum*, *Asa fatida*, and the like. *Sennertus*.

VIII. If the Palpitation come from Wind, Electuaries and other Compositions must have no Symplicia de Pomis in them: for Apples keep their windiness to the third concoction, as *Avicenna* writes. *Rondeletius*

IX. A certain Valetudinary Prince, when he had been a long time most grievously troubled with Palpitations of the Heart, could find relief by no Medicines. A young Physician coming in, tells, how he found in some Writings of the former Age, that a certain kind of Worm sometime breeds in the Heart, which by taking a Clove of Garlick Evening and Morning may be killed; which Remedy was neglected, and accounted despicable. But at length, when the Disease had killed the Prince, his Body was opened, a white Worm, with a very sharp horny snout, was found sticking to the Heart; which the Physicians took, and put alive into a Circle drawn on the Table with juice of Garlick; it crept about and about; and was wonderfully tormented, but would not touch the Circle. At length being overcome with the sent of the Garlick, it died within the Circle.

X. A Noble Matron of *Newemburgh* 35 years old, had been troubled with the Hypochondriack Disease for ten years: She was taken with so violent a Palpitation, that one would have thought her Heart would have broke her Ribs and leaped out of her Breast. When I was called, I presently ordered an Emollient Glyster to be given her, because she never went to Stool, but upon meer necessity. This was succeeded by a Carminative one. Afterwards an Epitheme was applied of Treacle, *Consolidio hyacinthina*, and *Alkermes* without Amber or Musk. Then the following Potion was given her; Take of Water of Balm, *Carduus Benedictus*, each 1 Ounce, Orange-flower Water half an Ounce, Cinnamon Water 2 Drachms, *Syrupus corticis Citri*, made according to *Zwelfer's* Correction, and of *Betony* Flowers each half an Ounce, Oyl of Citron rind 2 Drops, prepared Pearl 5 Grains, Saffron 1 Grain. In two hours time it left her, and never returned again.

XI. This must be reckoned in the Palpitation, which comes from heat and abundance of Blood; we must neither use hot things, lest the effervescence be increased, nor cold ones, lest, when the efflux of Vapours is stopt, the Palpitation grow more violent. For it is sufficient to use temperate, strengthening, and odoriferous things.

XII.

Horstius,
Dec. 5.
Prob. 3.

Hor. Augu-
stus, l. 10.
de Sili. c. 11.

Saxonia.

J. Heben-
strein, l. de
Pelle.

Saxonia.

Mercatus.

XII. Issues are very good in the Palpitation of the Heart, as I have happily experienced. Which, since they may be made in divers parts of the Body; if the matter falling from the Head cause the Palpitation, as *Hippocrates* says, it is best to make Issues in the upper parts; and in this case I use to

Mercurialis. advise an Issue in the right Arm. But if it be essentially in the Heart, or come by consent with the lower parts, it is much better to make an Issue a little above or below the Knee.

XIII. In this sort of Disease we must insist long on Medicines; for after six months, or a whole year, the Disease uses to return; as I have known several. Wherefore we must always be doubtful of it, and not be overjoyed, because it ceases for a month or two.

XIV. *Joh. Prævotius* in a years time cured Baron A. of a Palpitation of the Heart, and of all the Arteries, in manner of an Aneurism, from retortid Bile, with drinking of Whey, and bathing in fresh Water. *Fernelius* mentions this Pulsation, *Patb. lib. 5. cap. 12.*

Rhodius,
Cent. 2.
Obl. 40.

XV. Since the Causes are various, the Cure must also variously be insisted on: For what some hold, that these Remedies, which are vulgarly called Cordials, do refresh the Heart, and are thought to help it, as it is laboring, this is repugnant to Reason and to ordinary Experience. Since therefore we have declared, how the Palpitation of the Heart proceeds from some fault in the Blood, or in the Arteries that are joyned to the Heart, and have shewn the divers ways of affecting both of these, an apt method of Cure must be accommodated to every sort of that Disease. 1. Therefore, if the Disease proceed from some fault in the Blood, the primary Therapeutick intention must be, to exalt the Blood, that is too watry, and unfit for Accension and Fermentation, to a better *crasis*, and to exalt and increase its active Principles, that are depressed or diminished: For which purpose, Spirituous Medicines, also Saline of all sorts, Sulphureous, and especially Chalybeates, are proper. Here also we may prescribe such things as are used in a *Leucopneumonia*, *Pica*, and a cold Scurvy. 2. The Palpitation of the Heart, which is more frequent and much more violent, comes from the Cardiac Arteries; and then their fault is either an Obstruction, or a Spasmodick Affection. The first Disease is usually continual, and often incurable, especially if it comes from Consumptive Lungs, or from a Tubercle at the Roots of the Arteries, or some bony Excrescence, whereby they are half stopp'd up or compress'd; Which causes, if at any time they be there, and can perfectly be known, it would be in vain to endeavour to remove them: But rather this only must be done; we must give the Patient some ease by an Hypnotick, to prolong a miserable Life a little further. Nor is it also improbable, that the Arteries are in a great measure filled by Polypous Concretions, that are used to breed there, and sometimes within the Ventricks of the Heart, and therefore the free and total exilition of the Blood is hinder'd. As the Diagnostick of this is very difficult, so I think the Cure of it is no less rare. When there is suspicion of it, Saline Medicines especially seem to be of use, and such of them must be given, as are endued with a Volatil or Acid Salt. And the same things must not be given together, but these for some space of time, and (when they will do no good) others may be tried. 1. Spirit of Sal Ammoniac compound with *Millepedes*, or distilled with other Antasthmaticks 3 Ounces. The Dose from 15 Drops to 20 thrice a day in some Julep or appropriate Water. 2. Spirit of Sea-Salt, or Vitriol, impregnated, distilled, and often cohobated with Spirit of Wine, and Pneumonick Herbs, 3 Drachms. The Dose from 15 Drops to 20 in the same manner. 3. The Palpitation of the Heart is often a Convulsive Affection,

and is usually produced by the like cause and way of efficiency, whereby other Hypochondriack and Asthmatick Diseases are usually produced. The Cure whereof must in like manner be attempted by Antispasmodick Remedies, &c.

Saxonia mentions this last sort, *Prælect. Pract. parte 2. cap. 1.* It must be observed, says he, that it is caused by some fault in the Nerves alone, nothing appearing amiss in the Brain, Breast, or Muscles: Which I observed in my Brother, whom I perfectly restored by the use of Treacle only, applied to the beginning of the Spinal Marrow.

XVI. The Trembling of the Heart (which they commonly call the Passion of the Heart) is a Disease distinct, yea, quite another, from the Palpitation of it. For in the Trembling the Carnous or Motive Fibres seem to be affected by themselves, and the Morbifick cause does not in this, as in the other Disease, consist in the Blood, or in the Arteries of the Heart. The trembling of the Heart may be described to be a Spasmodick Convulsion, or rather a Trepidation of it, wherein the Motive Fibres do very quickly make only semicontracted, and very speedy *Systoles* and *Diastoles*, but abrupt, and as it were half strokes, so that the Blood can be brought into the Ventricks of the Heart, and carried out only by small portions. The formal reason seems to consist in this, that the Animal Spirits belonging to some certain Muscles, do start restless out of the Tendons continually into the Flesh, and return, and so in a perpetual vicissitude they repeat their Excursions and Recursions; in the mean time when they are only exalted with small Forces, so that they do not fill up the Carnous Fibres, and they stay in these Fibres only a short time; and although they make sometimes, frequent efforts, yet they are weak; insomuch that the Members and Limbs are not moved out of their places by the Muscles, so perpetually agitated; and the Heart, during its trembling, how quickly soever shaken, yet it is scarce able to drive the Blood about; as is plainly manifest from the little, and as it were, tremulous pulse, and a decay of all strength. As to the Conjunct and Procarterick Causes, whereby namely the Muscular Spirits are made so instable, or acquire this Desultory Faculty, it seems, that some Heterogeneous and Elastick Matter, having pass'd the Brain and Nervous Ducts, then is carried into the Muscles, and the Tendinous ends of them, where mixing now and then with the Spirits it irritates them, so that they can be quiet no where, but run hither and thither continually, and in the mean time they either omit, or do not strenuously perform their proper Offices. The cause of the trembling of the Heart is commonly laid upon the Spleen; for it is vulgarly supposed, that foul Vapours are, by this parts being obstructed, or otherwise amiss, sent to the Heart, which seizing of it, make it so shake and tremble, yea, as if it were in a cold fit. This Opinion has gained some credit, because Hypochondriacks or Spleneticks are found to be very subject to the Cardiac Passion. But the reason why they that are reckoned Splenetick and Hysterick, are so commonly troubled with the Passion of the Heart, is the great affinity, and intimate communication between the Splenetick and Cardiac Nerves, so that not only the affection of one Part does draw another easily into consent; but if at any time Spasmodick Matter falls upon the Branches of the Nerves belonging to the Spleen or Bowels in the lower Belly, it seldom misses, but the same in like manner seizes those that belong to the Heart. As for the method of Cure to be followed in the Cure of the Passion of the Heart, because it is a Disease merely Spasmodick, therefore not Cardick, but rather Cephalick and Nervous Medicines are indicated, which yet according to the Temperament and Complexion of the Patient must be hot or moderate, and sometimes of some

sometimes of the other nature. That I may comprehend the business in short, three sorts of Medicines use to do the most good in this Disease, Testaceous, Chalybeates, and things endued with a volatil salt. Therefore first of all provision being made by evacuating the whole, Medicines may be prescribed, which shall seem to be most useful.

Idem.

Medicines especially made use of by eminent Physicians.

1. Let a Man take this Potion inwardly, which I have seen do good to a miracle; Take of Water of Borage 5 ounces, Syrup of Borage 1 ounce, Julep of Roses, Cinnamon Water, each half an ounce, dissolved Pearl 2 drachms, dissolved Gold 1 drachm. Mix them.

Crato.

2. Spirit of Balm alone cures the Palpitation of the Heart, when the Body is purged. Take of Regulus of Antimony 2 ounces, the best Gold 2 drachms: Melt them in a Crucible, then reduce them to Powder, add of red Coral, Pearl each 2 drachms. Mix them through a Sieve. Add the like weight of the best Nitre. Burn them in a hot Fire for three hours. Powder them very fine. Wash it in sweet Water. Put it into a Glass retort with the best Spirit of Wine, and distil the Spirit, colorating it three or four times upon the Powder. So it is prepared for an excellent Bezoardick Powder, which in virtue excels the Bezoar-Stone. The Dose half a drachm with Water of Carduus Benedictus, Meadow-sweet, or Balm. It is given to drive out, in Palpitation of the Heart, Malignant Fevers, and the Small Pox.

Faber.

3. For the Palpitation of the Heart I ordered the following Bag to be applied to the Heart; Take of dry Balm 4 handfuls, the Cordial Flowers 1 pugil, shred them grossly. Make a Bag. When it was applied to the Heart, the Palpitation ceased to a miracle. There is an admirable virtue in Balm both taken inwardly, and applied outwardly. I took green Balm and Borage, bruised them a little, laid them upon a hot Tile, sprinkled them with a little Rose Water and Vinegar, and applied them to the Heart; and the Palpitation of it ceased, to the admiration of all Men.

Forestus.

4. The Juice extracted out of Weather's Hearts strengthens the Heart wonderfully; Take the Heart of a Weather or a Kid, dry it, stick a few Cloves in it, put it in an Earthen Vessel, set it in an Oven, in which the Heart dissolves into juice. Give it the Sick to drink.

Grembs.

5. The following Water is a great Secret; Take of Hearts of Hogs, of Harts each N. 2. Cut them in pieces. Add of Cloves, Galangale, Seed of Basil, each 2 drachms. Flowers of Bugloss, Rosemary, Borage, each 2 Handfuls. Let the Spices and Seeds be cut and bruised after a gross manner. Put to them as much Malmsey Wine as is sufficient. Digest them for 24 hours. Distil them. The Dose, half an ounce with Sugar.

Herlicius.

6. A piece of fine White Bread, sopt in Wine of Crete, and eaten, is admirable for strengthening the Heart, and stopping its Palpitation.

Joel.

7. In a Palpitation from a cold Cause true Rhapontick is of incredible Efficacy, if 2 drachms of it be taken in Wine; or if Wine wherein the same Rhapontick, All-heal, *Aristolochia rotunda*, or Fennugreek has been infused, be drunk.

Mercatus.

Paralysis, or the Palsy.

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Medicines.

I. Some mention Venæsection, which yet, unless there be a Plethora, seems not proper, because here is not the same danger of extinguishing the Vital Flame, as in an Apoplexy. But yet, if the Blood appear not to circulate conveniently, and that from above, small Pulse and short Breath, I think Venæsection altogether necessary, for the same Reasons, which we propounded in the Apoplexy, [See Tit. Apoplexy Book I.] And I recommend these two Signs, taken from the Pulse and Respiration, to be carefully observed by all Men, because they are the principal Signs of the Blood's Restagnation about the Ventricles of the Heart, and of danger of Suffocation. ¶ Although Medical Writers do usually respect Pituitous Matter, yet since it is manifest, that it sometimes arises from Plenitude of Blood, this may be let boldly. I speak this, because some fear to do it: reckoning that a Palsy always comes from Phlegm. I know a Woman, who, when she had been let six ounces of Blood, could not be cured; but when some pounds had been let, she was cured; though some Physicians were afraid of so great a quantity: And I know two Men, who by bleeding in great quantities, and at several times, were cured: Therefore in a Sanguineous Palsy Blood may be let boldly, not once only but oftner, not in one place but several. But if in the Palsy there be not a Legitimate Sanguine, but a Spurious Plenitude; Blood must be taken away, yet sparingly, as *Avicenna*, *Paulus*, *Alexander*, and *Celsus* are of Opinion: For the last, *l. 3. c. 27.* writes, That Bleeding and Purging are good for Paralyticks. In this case it must be let sparingly, only to about six ounces.

Sylvius de la Boe.

P p p

Yet

Yet this must be observed, That it the Palsy seize all the Parts of the Body but the Head, the Haemorrhoid Veins must be bled: If one part be free, Blood must be let in that.

Saxonia.

II. Vomits sometimes do abundance of good in curing the Palsy, namely, because they substract Matter from the Conjoint Cause; and they do not always drive further the Matter impacted into the Nerves, but make Revulsion of it, shake it, and often break it into pieces, so that when the continuity of the Mass is broken, the Animal Spirits themselves do easily dissipate the Particles of the Morbifick Matter, when they are parted asunder.

Willis.

III. There is a Controversie between *Rhases* and *Avicenna*, whether we may Purge in the beginning. *Avicenna* before giving of Purgatives, propounds Preparatives and gentle Medicines. *Rhases* at the very first uses *Pilula Cochia*, and consequently strong Purgers. I thus compose that Controversie; When the Palsy is new, through some great fault in the Head, as after an Epilepsie or Apoplexy, I am of *Rhases* his Opinion, presently to give a Purge. The Reason is plain; for there is danger of the return of the Epilepsie or Apoplexy, which we must immediately prevent by giving a Purge. But if the Palsy be old, in a determinate part, without hurt of the Brain, *Avicenna's* Judgment must be followed, first a Lenitive must be given, and then Preparatives.

Saxonia.

IV. In the Palsy our Ancestors observed this, that in the beginning it must be treated with gentle Medicines, and not with very violent ones, whether taken inwardly, or applied outwardly. Certainly I have sometimes observed, That a Palsy of one side has followed that which was only in a part; and sometimes an Apoplexy has followed this, the abundance of Noxious Matter being agitated in the Head more than it should be, when any one has endeavoured to carry it off by a sharp Medicine. And there is a great Error oftentimes committed, in that, when the Head and Body are not well purged, such Medicines are given, as by their heat and motion easily get into the Head, and there they put the Humour into Fusion and Fluxion, which Nature by rest and a good Course of Diet, would have at length overcome and concocted. Experienced Physicians know this.

Solenander.

V. I do not disapprove of *Oxymel* with other Preparatives, although Vinegar be an enemy to the Nerves, as they are dry parts; but when they are imbued with, and full of Pituitous Juice, Vinegar is not hurtful, and especially diluted with Honey, and mixt with Syrups.

Saxonia.

VI. *Sepralius*, l. 6. *Anim.* 74. rejects Sudorificks, and prefers things that provoke Urine, and he thinks Physicians generally commit a great Error, that, omitting promoters of Urine, they use Hydroticks, because thick Matter is also carried off by Urine: And when the thinner part is evacuated by Sweat, the thicker is rendered more hard, obstructive, and difficult, as to Motion and Evacuation. But grant all this to be true in Diseases, whose cause lies in the Bowels and *Hypochondria*, or in the Veins, yet the reason does not hold in the Palsy: For seeing the cause of the Disease sticks about the Nerves, I see not how it can easily get from thence to the ways of Urine: But Evacuation by the ambit of the Body is easie. Nor need we fear, that by the use of Sudorificks the Matter will grow too hot, because it is cold, and so requires heating, inasmuch that some think, a Fever should be raised, which may heat and melt it; Nor that it will grow thick, seeing Hydroticks have an Attenuative virtue.

Sennertus.

VII. Opiates are much commended by Practitioners, which, because of the *Opium*, are very much suspected by me in the stupidity and imbecillity of the Nerves. And they give Treacle, Mithridate, *Aurea Alexandrina*, &c.

Platerus.

VIII. There is not one among the vulgar, but may easily observe, that Diaphoreticks do much good, and sometimes much harm. Wherefore it is of much moment, to explicate the Reasons of so different an Effect. Therefore plentiful Sweating is sometimes good for Paralyticks, upon a twofold account especially, namely, because it plentifully exterminates the Impurities of the Blood and Nervous Juice, that are apt to exhale; And, that the Morbifick Matter may flow no more to the Brain and parts affected, and that what is flown already may in part be thrown off. And secondly, because the *effluvia* of heat, flying from the assuaging Blood, do very much open the Nervous Ducts, stop before, and open a passage for the Spirits, while in Evaporation they pass that way. Wherefore this Administration is proper for them especially, and in a manner for them only, whose Blood, not being very full of fixt Salt and Sulphur, is diluted with a limpid and insipid serum. For on the contrary, Paralyticks, in whose Blood and Humours there are abundance of wild, exotic Particles of enormous Salts and Sulphurs, that are fixt, and unfit for exhalation, do find a great deal of harm from violent Sweating. Of which Affection we assign these two Causes, namely, That the Morbifick Particles through agitation being too much exalted, become more outrageous. 2. That when abundance of them is driven into the Head and Nervous Kind, they often increase old Obstructions, and not seldom produce new ones.

Willis.

IX. If Pains about the Arms and Shoulders do accompany it, we order Sweating in Bed, to be raised with heated Bricks, or Bottles full of hot Water, that the Matter sticking among the Muscles may be digested and resolved; yet above all these things, Sweat must rather be raised by the ambient heat, than by the internal use of a Medicine or Decoction that melts or thins the Humours, which is proper only when in the Stove Sweat does run plentifully, all the Matter being put into fusion: Whereas otherwise, if the antecedent Humours be dissolved in the Veins by a Decoction, and when they are dissolved, be not discharged, but tarry in the Body, they will increase Pain. Which, as Reason it self teaches us, so I have found true by Experience, so that I can never do enough, to extirpate this abuse. Therefore, when the Matter is but little, and therefore the Pain but small, when we intend not to move or put into fusion the antecedent Humours residing in the whole Body, we only give a Decoction of Groundpine, so much commended by *Matthiolus* upon *Dioscorides* in these cases. Whereto if you add a little *China*, it may not be amiss; abstaining nevertheless from Mistletoe of the Oak, and such melting things, as also from Sanders, which hinder Sweat.

Fortis.

X. The Head also should be dried with a Sudorifick Decoction, but that is very much suspected by me: for I am afraid, lest the Humours of the whole Body and of the Head being melted, fly into the Head violently, and cause an Apoplexy. Wherefore I should more willingly use some Decoction, not very colliquating, but cherishing the innate heat, and dissipating the Matter impacted into the Nerves, as well as drying the Head, the Matter being rather derived to the Center by Urine, than to the Circumference by Sweat. The Decoction may be made of Mastiche Wood, Rosemary, Mistletoe of the Oak, and a little Sassafras in Pigeon Broth, giving first Turpentine with Salt of *lva Arbritica* and *Sat Theriacalis*.

Idem.

XI. Loosning and alterative Clysters are very convenient, having a care of over emollient ones, whereby the Spine being more relaxed would be further hurt, so that not without reason the Vulgar think Clysters in the Colick occasion the Palsy: Which nevertheless rightly prepared, both do good,

Platenus.

good, and if the Cause lye about the lower part of the Back, may serve for Topical Remedies.

XII. But indeed as generous Medicines, if they turn not to Alexitericks, often prove Poysons. So going into the Bathes, has made these Paralyticks much worse, whom it did not cure; so that when more parts, and those that were affected before grew more Paralytick, the Lame leave their Crutches there for no other reason, but because they cannot use them, when they are made more impotent. The reason hereof is, because Bathing, by disturbing the Blood and all the Humours, does more exalt all the Morbifick and Heterogeneous Particles, and forces them, being enraged, out of the Bowels into the Mass of Blood; whence, because they do not easily evaporate, entering the Brain and Nervous Kind, they increase the Palsy, and often cause a Convulsion. For this reason Bathing sometimes first actuates the Stone in the Kidney, and the Gout, and brings a Spitting of Blood, *Asthma* or Consumption upon many, when there was no disposition to it. Wherefore the Bathes should not be tried without the advice of a Physician, and if when they are tried, they do not agree, they must be quickly left.

XIII. Bituminous, Sulphureous Bathes cure a Palsy succedaneous to the Colick. And they do good not only by drying the Humours, and strengthening the Parts; but I rather think, that the adust, salt, nitrous, and tartareous impurities of the Humours and Vapours in Man, which spoil the virtue of the Nerves, are quite dissolved by the virtue of the Bathes, and being dissolved, are by a peculiar and Mineral Analogy, which the qualities of the Bathes have with the divers Humours and Juices in Man, drawn to the ambit of the Body, and so our Bodies are delivered from the Enemy that besets the Nervous Kind, not without corroboration. The Efflorescence of the Skin in such as use the Bathes often, sometimes coming with a troublesome Itch, shews the truth of this. Which Efflorescence indeed you can scarce explain otherwise than by the solution of the Salts latent in the Body. Neither yet will I deny, that the great heat of the Bathes does now and then contribute something for Revulsion of the Matter outward: for I remember one that was dangerously ill of a fit of an *Asthma*, having put his Feet into Strong Beer, very hot, upon a translation of the Humour of *Asthmatick* became *Arthritic* on a sudden.

XIV. According to *Avicenna*, Medicines that evacuate insensibly ought to be strong and far. Strong, that is, violently hot and very thin of substance, and the reason is, because the Nerves and Spinal Marrow lie deep. They must be far, that by their means the strong Medicines may stick the longer, and that their virtue may not waste, and that they may prevent the breeding of a *Scirrhus*. Besides the greatest Dose of Medicines is approved; for the Morbifick Matter is cold, thick, viscid, impacted, and therefore of so great activity, that it will not yield to Medicines, unless they act violently, that is, unless they be given in the highest Dose, so that sometimes even by reason of the height of the Dose a Fever may be raised; for according to *Avicenna*, Paralyticks are holpen by a Fever. Wherefore *Rhazes* gave one 2 drachms of *Confectio Anacardina*, which is hot in the third degree. In our days we only give a few grains.

XV. That some Paralyticks are cured by Salivation with *Mercury* is proved both by my own and other Mens Experience. Yet this sort of Remedy, I think, must be used only in an habitual Palsy, that has its Procaratick Cause in the Blood and Brain, moveable enough, and the Conjunct Cause in the Nervous Appendix, not very fixt. But when this Disease is caused by some External and great hurt, or follows a *Carus*, Apoplexy, or Convulsions,

Salivation is almost always tried in vain, and sometimes not without great hurt. Whoever therefore have a weak or an over lax Brain, are subject to a *Vertigo*, Stupidity, and Convulsive Motions, let them not lightly use Mercurial Medicines: Yet sometimes Salivation in an habitual Palsy, and one that is not very fixt, doth much good, as by taking away the impurities of the Blood, it cuts off all Matter from the Disease. Also as some Mercurial Particles, when, having passed the Brain, they come into the Nervous Ducts, do divide the Morbifick Matter impacted in them, and severing the parts thereof one from another, they variously disperse them, some one way some another. Whereas it is the fault of other Medicines oftentimes, that they can only make an effort upon the Mass that stops the ways of the Spirits, and therefore if they do not separate it into parts, they drive it faster into the obstructed places.

XVI. In the Palsy I have used inunction with Quick-Silver, whereby I cured a confirmed Paralytick, one *Julius* a Shoemaker, who is yet alive. After an Apoplexy and an old Pox, he fell into a Palsy of his Right Side. I used the Ointment of *Mercury* in this manner; Take of Quick-Silver 5 ounces, Hogs Lard 1 pound, Hens Grease, Ducks Grease each 2 ounces, *Sagapenum*, *Opopanax*, Castor, *Assa fetida* each 1 drachm, Mustard, Pepper, Pellitory of Spain, *Euphorbium* each 1 ounce and an half, *Iva Aritrifica* half an ounce, Oyl of Turpentine 3 ounces. Mix them. Make a Liniment. I anointed the hurt part especially with this Medicine, and others also, and Salivation succeeding, the Patient grew well.

XVII. Whether is it proper to raise a Fever in the Palsy? I answer in short, In Cacoehymick Bodies, we may not use such hot Medicines, as to raise a Fever on purpose. The reason is, because such Medicines corrupt bad Humours, and will breed a Putrid Fever, which will be worse than the Palsy. But if the Body have been already exactly purged, hot Medicines, if they do cause a Fever, raise an *Ephmera*; This is not dangerous, and yet it both heats the Nerves, and digests the Matter.

XVIII. If the Palsy have its original from External Humidity, and either a Nerve or Muscle be disaffected, it is not so difficult to cure, so it be not neglected, but cured in time, before it have contracted an ill habit: for then it is difficult, and sometimes cannot at all be removed or conquered, that is, when the laxity has proceeded so far, that it cannot perfectly be restored. And it is no new thing for the Membranes now and then to be so moistened and softened, that they cannot afterwards be reduced to their pristine firmness, and natural tension, but then they are either too much or not stiff enough, either of which is a fault. I do not see any reason, why this may not happen in the Body, yea, that it must happen, this Disease being often incurable, does argue.

XIX. Infusions made in Wine especially do good: for though Wine, especially if it be strong, be not at all convenient, yet joining the virtues of other things to it self, and carrying them, as a Vehicle, to the Nervous Kind, it will make an useful Medicine, taken in its place.

XX. I cannot much approve of *Confectio Anacardina*, as it is now prepared by the Apothecaries, because of the Myrobalanes, which being much astringent, cannot be mixt with very hot things; for they cause the Medicines to tarry long in the Body, and do harm. This is the reason, why this Confection causes a Fever. It is better therefore instead of Myrobalanes, to put in some Medicine of subtil parts, as Cinnamon and the like.

XXI. I do a little suspect Sinapisms, Blisters, and Cauteries, because they digest more violently than is convenient for a Disease of six years standing.

Willis.

Saxonia.

Idem.

Sylvius.

Platerus.

Rondeletius.

Willis.

Thiermair,
Conf. 3. l. 2.Capivac-
eius.

Silvaticus,
cent. 1.
conf. 82.

ing, in which time the Morbifick Matter must necessarily be impacted: Unless there come a new Fluxion; for in this case they will do much good for Evacuation of the Matter.

Epiph. Fer-
dinandus,
Hist. 46.

XXII. We must proceed to a singular and excellent Remedy, The Body must be exasperated and its Sensifick Faculty, if I may so say, awakened, especially when the Body is well purged, and other things done; And it is to apply Stinging Nettles, or to whip all the Body with Nettles; which is not our invention, but is laid down by *Celsus*, l. 3. c. 27. And I attest I have used this sort of Remedy in several, and always with great felicity: for I was scarce ever deceived when the Body was well purged.

Scholtzius,
conf. 50.

XXIII. Although *Galen* and other Physicians write, That Remedies must not be applied to the hurt Parts, but where the Nerves arise; yet I think this must be understood thus, That Remedies should be applied especially where the Origination of the Nerves is. But the same Men do not deny, but that it does some good to apply Medicines to the hurt Limbs. And especially when peccant Humours have dispersed themselves far and near, and are got into the hollow of the Nerves, and must be dissolved. And Physicians, after Evacuations use to apply Remedies to the Relaxed parts: for in the Apoplexy, which is called an universal Palsy, the whole Body is usually anointed with Odoriferous Oyl.

Saxonia.

XXIV. This must be observed, That we do not apply a Medicine to the Paralytick part, as some do *Droppers*, who by this means think they can recall the heat and sense of the Part, if they burn the Part with hot Medicines, which do no good, but may cause a Gangreen in the Part. Medicines must be applied to the Original of the Disease, not to the part affected it self.

Solenander.

XXV. A certain Young Man tarrying a long time for his Sweet-heart in a Wine-Cellar, was taken with a Moistness and Palsy in his Limbs: And when the Physicians were puzzled about applying Remedies to him, one carried the Young Man to an Oven, and making a Bed for him, he heated some Nut-Tree-Leaves in the Oven, when they were hot he wrapt them in Linnen Clothes, and laid the Young Man in them, and covered him well up, and presently Sweat burst out in abundance. While he Sweat, he was refreshed with a little Chicken Broth, and he was well.

Sylvius.

XXVI. Oyls, Liniments, Unguents, Plaisters serve to correct and consume the Pituitous Humour, and indeed in them only whose Skin can bear fat things. For it happens to several, that upon the application or illinition of any fat things, presently Pustles arise, and an *Erysipelas* takes the whole Body, and sometimes Mortification and Gangreen of the part does follow, which will be proper for the Physician and Patient to observe. When therefore the Patient can bear fat things, they must be used in a various form, and especially the Oyl, because they penetrate more easily and deep. But where fat things are hurtful, Roots, Herbs, Seeds, &c. proper for the Palsy, may be infused in rectified Spirit of Wine, and the Parts affected may be anointed with it.

XXVII. As there are manifold forms and divers causes of the Palsy, so the Cure of it must not always be insisted on in the same manner, but by a various method, appropriate to each sort. There are usually these three kinds, or three methods of Cure, as the Palsy is caused suddenly. Either, first, From a blow or fall, &c. Secondly, It follows some other Disease, that is, an Apoplexy, *Cajus*, &c. Or, Thirdly, As a Disease primary and *per se*, and depending upon a *Procatarxis*, or some previous *Apparatus*, it is caused by degrees. When it comes the first way, the only intention of Cure is, that the hurt part may recover its pristine

strength; and first, Let the Blood and other Humours flowing to it, as to the affected and weakest part, should increase the Disease, Blood must presently be let, a moderate Sweat must be given, to the end, that all superfluities, being got out of the part affected, may exhale in abundance, and that the Spirits gently agitated may begin again their old rounds, within the pores and passages of the part being unlocked by the hot *effluvia*. To this end *Pulvis ad casum Augusti*, *Decoctum traumaticum*, or a Decoction of Madder Root, or Butter-burr, or Flowers of St. John's Wort may be given frequently. Moreover, in the mean time the place affected must be diligently enquired. Secondly, When a Palsy comes upon a Fever, Apoplexy, Colick, and other Diseases, it is a great one, and comes suddenly. First of all we must use our skill in Physick to remove its Conjunct Cause, which usually has its seat in the *Medulla oblongata*, or *Spinalis*. Thirdly, An habitual Palsy depends on the *Procatarxis*, either in *fieri* or disposition, or in *falso* or habit, each of them requires a peculiar method of Cure. The intentions of Cure in the former will be. 1. That when the works of making Chyle and Blood are rightly performed, Matter both laudable and plentiful enough for the breeding of Animal Spirits may be supplied to the Head. 2. That the Brain, being still firm, the Heterogeneous Particles being excluded, may admit proper ones, and rightly exalt them into Animal Spirits. But if a Palsy arise after a previous disposition in the whole, or in one side, or in certain parts, a large and complicated method is always requisite, and often not sufficient, for the Cure of it: for not only the Disease, or its Conjunct Cause, or the Procatarick, must be opposed severally; but all of them must be opposed at once. Cephalick and Antiforbuitick Medicines use to do most good against the Procatarick Cause of the Disease. But all such are not proper for all Men; but, as we have observed in the Scurvy, according to the various Constitutions of Patients, so the Medicines must be of a different kind and virtue. For Medicines that are hot and endued with very active Particles are not proper for Bilious Paralyticks, in whose sharp and hot Blood there are much Salt and Sulphur, and but little Serum, yea, they often do harm; which yet are very good for Phlegmatick Persons, whose Blood is cold, contains much Serum, and few active Elements. Wherefore according to the twofold state of Patients, it will be proper to proceed in two methods; one whereof must be for cold Paralyticks, another for hot.

Willis.

XXVIII. *Paulus*, l. 3. c. 43. writes, That in his time there was a Colick, which ended either in a Convulsion or a Palsy; and that it could no way be cured but by a certain rash Physician, who cured it with cold Herbs, drinking of cold Water, and incrassating Mears; whence one may gather, that the Humour was hot and bilious. I also a few years since saw an illustrious Bishop, who after a Colick fell into a Palsy in his Arms, and used hot Medicines a long time to no purpose; at length, when for a long time he had used cold Herbs, (not to cure himself, but on account of Religion) and cold Water, &c. he was cured of his Palsy. ¶ Seeing it comes sometimes from bilious and hot Humours in abscesses after acute Diseases; and sometimes from abundance of Blood falling upon the Veins at the Spine, it must not be cured by hot Medicines. For in the first case emollient and temperate things must be used, such as Fat and Marrow: but in the second case only Blood-letting is usually the Remedy: for a Palsy from Blood is not a true Palsy; but is cured by accident, in as much as the Veins being full do compress the Nerves.

Saxonia.

Fonsca.

XXIX.

XXIX. I have seen several Melancholick Persons cured by the use of Chalybeate Medicines, who being deprived of the motion of their Limbs, have been reckoned Paralytick. Among these was a Noble Maid, who belonged to the Queen of *Burbonia*, who being deprived of the use of her Limbs by the violence of the Melancholick Juice, and committed to my Care, by GOD's Blessing, left me chearful and in her perfect Health, all that had her in hand before admiring the success, in whose Judgment she had a Palsy, and they went a quite contrary way to work to that which I went, by means whereof I cured her. ¶ So in the year 1663. one of *Newemburg*, by name *Convers*, took my Advice, when I lived at *Geneva*, for a numbness in all his Limbs. The Physician, which he had made use of, contended with the Pituitous Humour, being intent on strengthening and drying the Brain, which was too dry already. Because there were remarkable signs of an Hypochondriack Affection in him, I bid him be of good cheer, and lay aside all vain fear of a Palsy. So laying aside his prescribed Medicines, a Decoction of *Guajacum* and such things, whereby a great driness was brought upon him, and instead thereof giving Chalybeate Waters, and opening things, in a short time he perfectly recovered.

XXX. It is known, that Convulsions arise from Malignant Vapours coming from Worms; but I do not remember, that I ever read of a Palsy arising from thence. A Noble Maid was twice taken with a Palsy of her left Side, being as it were turgid with Blood, but easily dispersed, a Vein was opened on the contrary Side, Revellents and other things were used: but the latter time, after she had taken some Pills, she voided a great number of Worms, and after that has lived well till this day.

XXXI. Being taught by Experience, we judge, when the Colick Pain ends in a Palsy, that the Matter gets out of the Guts into the Limbs, and habit of the Muscles, by means of the Veins: Wherefore the Nerves and Tendons, which are inserted into the Muscles, both because of their fulness do not admit the Animal Spirit; and especially because of their softness, are distended, and cannot contract the Limbs, whereinto they are inserted. This Palsy therefore differs from that, which accompanies an Apoplexy or Paraplegia, in its Original and Causes: For in that, which comes after the Colick, all the mischief arises from the Intestines, and by violence is carried to the out parts, and seizes the Muscles, Tendons, and the out parts; oftentimes the Principle of the Nerves being unhurt, which in the other is affected together with the Head and Spinal Marrow. Hence it is obvious that they are much mistaken, who endeavour to cure this sort of Palsy, improperly so called, in the same manner as they do the true Palsy properly so called: Because in this later the cause of the Disease must be fought for about the beginning of the Nerves; which yet in the other way keep its natural Constitution. Therefore such a Palsy cannot be cured by curing the Brain, or the Spinal Marrow, but rather we must take care, that the Antecedent Cause, which is still in Fluxion, may be stopt: and that which is next the part, and in the original of that imbecillity, may be corrected and consumed, as much as may be.

XXXII. We must help Extenuation of the Limbs, beginning with gentle things, and fomenting the Arms and other parts, with parts of Animals newly killed, while they are hot: If that do not succeed, we must go to bathing in Sulphureous Baths: But if that do not succeed, we must proceed to Pication, but with great caution, taking great care that an Inflammation do not follow; for if the Swelling or redness go off quickly, it is well; but if they continue long, it is a sign of the fluxion of the Humour to the part, especially if the Veins

swell, which as soon as it appears, we must desist immediately: For this Remedy requires great care and skill in the Physician; yet according to *Galen*, this is the only Remedy above all others.

XXXIII. I have found, that the continued use of Nervous Infusions is excellent in the Palsy: And they do the work, because they act slowly and successively, and by searching deep they slowly open and put in motion, that which has been slow in gathering.

Medicines especially made use of by eminent Physicians.

1. If it come from the Head, this is an excellent Elixir; Take the small Roots of Bees; Bruise them, till they become stringy; then put these Strings into the Juice of the said Herb, into which a little Pepper, Masterwort, Castor, and *Elastrum* has been put, take one or two of these Strings, and put it up the Nostril, like a Tent; This brings away abundance of Excrements.

2. All things being premised that should, *St. Ambrose* his Syrup is very good to cause Sweat, with which I have cured several. It is made thus; Take of Millet excorticated what is sufficient, boil it in Water, till it swell and burst: To 7 or 8 ounces of this Water add 3 or 4 ounces of Greek Wine. Let the Patient drink this Potion in Bed in the Morning, and let him Sweat; and let him repeat this ten or more days, if need require. ¶ Baths wherein proper Herbs, especially Foxes, have been boiled, are very good. In a Palsy after the Colick, for the intemperature of the Bowels, except there be an Inflammation, I have used with great success the distilled Oyl of *Galbanum*, *Barberries* and Gum *Elemi* applied to the Navil. Fried Oats applied in a Bag is good in the same.

3. Universals premised, Let the Paralytick Limbs be anointed with Oyl of Cats, which is made thus; Take a fat Cat, flay her, and take out the Entrails, and cut off her Head; steep her for a night in *Aqua vita*: In the morning stuff her with Leaves of Bayes, Sage, Rue, Lavender, Rosemary. Lard her, and stick Cloves into her: Roast her with a gentle Fire, keep the Drippings. I have anointed the Paralytick Limbs with it, and then carefully wrapt them in Foxes or Cats Skins. ¶ Castor must not be omitted either inwardly or outwardly: for it has a wonderful property in all Palsies.

4. *Hyperus* highly commends Sage Wine, if a draught of it be taken Morning, Noon, and between Noon and Supper, for ordinary Drink. ¶ Spirit of *Sassafras* excels other things. ¶ Oyl of Aniseeds anointed on a Paralytick Tongue, restores Speech. ¶ Paralytick Limbs must be long rubbed with essence of green Tobacco Leaves a good while, made only by infusion in Malinsey Wine, a Sweat being first given.

5. Distilled Oyl of Juniper most happily cures a Palsy from great Wounds of the Head, if the Neck, and *Spina Dorsi*, and the Paralytick part be anointed with it.

6. The fat of a Fox either roasted or boiled, first stuffed with Betony, Sage, Marigold, *Iva Arthritica*, Primrose, and Rosemary, either alone, or mixt with Unguents, is of great moment.

[See Medicines for an Apoplexy, most of which are good for a Palsy, Book I.]

Paronychia, or a Whitlow.

The Contents.

*A Compendious and safe method of Cure. I.
We must take care of the Malignity. II.
Medicines.*

I. **H**OW painful, and long in curing, a Whitlow is, no Man is ignorant; yet if the part affected be cut in the beginning, the pain ceases, and the Patients are quickly cured. I was called to a Matron, who for three days and nights could not sleep because of a Whitlow, which violently pained her; having cut away the Skin, I found a Speck under it in the tip of her Finger thus big, O, in which scarce one drop of Ichor was contained when the Speck was cut, and a Cotton applied, dipt in *Aquaviva* wherein Treacle was dissolved; and a Linnen Cloth doubled and dipt in Water and Vinegar was applied to her Hand and Wrist, the pain immediately ceased, so that the next day her Finger was well. I have used this Cure in several others; and always under the Skin, near the Nail, I found something of Ichor. But this Incision must be made at the beginning, otherwise by the violence of the pain the Humours quickly run thither, which cause inflammation and swelling, which an erosion of the Flesh and Bones does follow: for the Skin there is very thick, hindring the transpiration of the Malignant Matter. Therefore before incision I order them to hold their Finger in Cow's Milk, wherein Flowers of Chamæmil, Melilot, Seeds of Fænugreek, Line and Quinces have been boiled. And there is no danger in Incision, nor Pain, nor offending the Nerves or Tendons, because it is superficial. But the other way, commonly used by Practitioners, namely, Incision, which is made from the *superficies* to the center, and towards the Bone, is very dangerous, for it hurts the Nerves and Tendons, whence comes pain, &c. It is sufficient for me to cut the *superficies* of the Skin by little and little, and then to scrape off the Skin, till the Speck appear.

Hildanus,
cent. 1.
obs. 97.

II. Physicians that are beginning to practise must observe, that in the Cure regard must always be had to Malignity. I have observed, that a Whitlow very rarely or never has its rise from an Internal Cause, unless some ill conditioned Diseases, as Malignant and Spotted Fevers, long Tertians, not ending, as they should do, in a *crisis*, or the Small Pox or Measles have gone before, especially when some error is committed either by the Patient or those about him in such Diseases. Of which this may serve for an Instance. In the year 1658. a Son of mine, Fourteen years old, was seized with a Fever, like a Tertian Ague, which when after the third fit it ended in a *crisis* by plentiful Sweat, he begged of his Nurse, that she would give over wiping the Sweat, who was afterward free from his Ague fit, and went about his business; but scarce fourteen days were over, when all on a sudden he complained of a swimming and pain in his Head, then he was neither able to sit nor stand, so that his prevailing symptoms cast him from his Stool to the Ground: He could not lift up an Arm, nor rear his Languid Body; and all his Senses being entire, a Cynick Spasm came upon him, and he was drawn variously now and then, yet his Limbs were flaccid, as if he had been Paralytick, he was speechless also at times, and made signs: And being asked what he ailed? He answered, He ailed nothing, only he was tired and feeble. I prescribe him Clysters, purge him gently, bleed him in the Arm, because he was Plethorick, and under the Tongue. I give him Sudorificks and Alexipharmacks, because of the Fever, gentle indeed

as to the touch, but malignant in effect, which not hastning so much as creeping to a *crisis*, behold, the Thumb and Ring-Finger of his Right Hand had Whitlows both at once; that of the Thumb vanished of it self, but that of the Ring-Finger required a Surgeon's help, and my Son recovered his Health. The cause of which Symptoms was the stopping of the Sweat which Nature endeavoured to cast off, whereby the Humours being afterwards corrupted, frothing up in the Fingers ends, (by the intervention of the Veins and Arteries, by benefit whereof the Circulation of the Blood is performed in these parts) gave occasion to the Whitlows, which, if I may so say, were preposterous *crises*, which, when Surgeons do not handle as they should, expecting perfect maturation, they render their Patients mucous, or lame of their Fingers ends, because the Bones do sphacelate.

Simon Pauli

Medicines especially made use of by eminent Physicians.

1. I have tried this certain Experiment several times; Take live Earth Worms, bind the Whitlow in the beginning, then check and heal it, so that it lasts not above a day. Baricellus;
2. The Blood of a Mole smeared over the Finger, and the Skin tied over it, cured a Whitlow in one night. Van Helmont.
3. The Crum of White Bread boiled in Milk, with the White of an Egg, and a little Turpentine stops the pain, especially if some Mucilage of *Psyllium* be added. ¶ Goose Dung is much valued by Surgeons as it is warm made by the Goose, and applied, which is requisite in this Disease. Platerus.
4. Worms found in the Teazle are good, if they be taken and bound on alive. Platerus;
5. Root of White Nettle, applied with Wine, I have often tried to be very good. Sennertus; Ströckerus;

Parotides, or swellings behind the Ears.

The Contents.

- When Blood must be let? I.
We must have a care to use Attrahents. II.
When the Tumour must be opened? III.
When the Abscess is opened, we must abstain from Evacuants. IV.
Those that follow a grievous Disease must be cured by burning. V.
Quick-Silver may safely be put in Cataplasms. VI.
They strike in after Blood-letting. VII.
Whether they must be opened with a Knife, or with a Cautey? VIII.*

I. **W**HILE we attend Suppuration, if perchance it should happen, that by the efflux of Humours either to day in the evening, or to morrow morning, the swelling should grow to such a bigness, that the Swallowing, and perhaps also the Breath might be stoppt, then without doubt we might proceed to take away Blood by opening a Vein, as *Galen*, 3 per loca, teaches us. Moreover, when the Parotides are caused by Blood, *Trallianus*, l. 3. c. 6. advises the opening of a Vein immediately, to prevent Suffocation.

Fortis, cent.
91. cent. 1.

II. Although *Oribasius* and *Aetius* advise, That not Repellents, but rather Attrahents should be used; yet if the Humour come with violence, the same *Aetius* advises, that nothing be done with Curiosity; yea, *Trallianus* observes, that if it be caused by Blood, Attrahents may very easily cause Suffocation, which was taken from *Galen*, 10 *Simpl.*

Nos

Idem. Not Repellents, says he, but rather Attrahents, or at least Laxatives, or the whole affair must be committed to Nature acting aright.

Idem. III. Although Celsus, 6. de re med. 6. advise the opening of a Parotis presently; yet this ought never to be done in the beginning, nor unless there be some suppuration of the Matter: Nor yet must we expect Pus in the Superficies, as some unexperienced Persons think, for before it rises, it sinks and diffuses it self into various and difficult Sinus's. Besides, if it be long before the Abscess be opened, the Antecedent Matter sticks in the head, when the Conjunct will not make way for it, for that without hinders that within.

Idem. IV. When the Abscess is opened, we must abstain altogether from evacuating and diverting Medicines, and must use only Clysters. As also we must insist on Attenuants, to wit, store of Zulepium Acetosum, with respect to the febrile heat.

Idem. V. In Parotides, that come after other great Diseases, I use burning in the very tumor, presently, without expecting any suppuration. For we can no way better prevent the falling back of the swelling, than if the Matter be purged out by the Ulcer, which is inflicted.

Vallesius. VI. One would scarce believe, did not Experience testify it, what virtue there is in Quick-Silver (which some reckon cold and moist) to dissolve and discuss swellings of the Ears, or any other Swellings. Therefore it may safely be mixt in Cataplasms; for it will not repel the Humour, that is the cause of the Parotis inwards, but will discuss it by insensible Transpiration.

Ench. Med. Pract. VII. A young Man, otherwise of a good Constitution, being ill of the Parotides behind his Jaws, was taken ill with a Fever: Upon which he grew worse, because perhaps they began to ripen; and the Physicians taking little notice of it, he was let Blood in the Arm, after which the Swellings immediately went in, difficulty of breathing followed, his Fever increased much; on the sixth day Exanthemata came out, with great weakness, and within a little while after the Patient died.

Rumlerus, obs. 56. VIII. The Abscess may be opened with a Knife, if the Patient be young, his innate Heat brisk, and if the Tumor be rather Phlegmonous or mixt with Bile, than Oedematous or mixt with Phlegm. Nor is the Knife always so safe, that is, when a Man is old, the Native heat weak, and the Febrile strong, and the Humour, the cause of the Swelling, inclining to cold; for then a Wound may cause a Gangrene, for which reason we use a Caustery in stead of a Knife.

Medicines especially made use of by eminent Physicians.

Fontanus. 1. Take of old Hogs Lard not salted 3 ounces, Butter 1 ounce, Wax 2 ounces, burnt Oyster Shells powdered 2 ounces. Make a Plaister. It is most effectual to discuss the Parotides.

Hertod. 2. This is an admirable Unguent to assuage and dissolve; Take of Oyl of Henbane expressed 1 drachm, Oyl of Chamæmil distilled half a drachm, of Saffron distilled 5 grains. Mix them.

Partus, or Womens Labour.

The Contents.

Whether Bleeding in the Foot help a hard Labour? I. Where a Child may be cut out of the Mothers Belly? II. Strong Emeticks help. III. When the Childs Head pitches above the Os Pubis, how it may be reduced? IV.

The Woman must be refreshed. V.

Violent forcing Potions are dangerous. VI.

If a Woman go with a live and a dead Child, which must be delivered first, if they both make way alike? VII.

Quick-Silver given with success. VIII.

How Labour may be made easie, when the Bones will scarce pass? IX.

How we must help Swooning? X.

The Eagle-Stone tied to the Thigh must presently be removed after delivery. XI.

Some must be left to Nature. XII.

What way things that promote the Birth, do act? XIII.

Facilitators of the Birth, properly so called, must not be given, till the Child is ready to be born. XIV.

Reduction of a vitious posture not always possible. XV.

Medicines.

I. Hippocrates, 1. de Morbis Mulierum, prescribes a Remedy for hard Labour almost omitted by all; it is Bleeding in the Foot. But if, saith he, a Pregnant Woman be kept a long time, and cannot bring forth, but is in Pains of Travail for several days: If she be young, and in her full strength, and abound with Blood, a Vein must be opened in the Foot, and Blood taken away, respect being had to the strength. Although this be never put in practice by Practitioners, but is rather dreaded, because strength is absolutely necessary in Travail, which is much weakened by Blood-letting; Yet if difficulty of bringing forth arise from a Plethora, which Hippocrates seems to intimate, when he says, if the Woman be young, and in her full strength, and abound with Blood, no doubt but it may do much good, seeing the Veins, when they are full of Blood use to make all the inner passages much narrower, therefore in the Nephritick Pain the like Bleeding often does wonders, and facilitates the exclusion of Stones contained both in the Kidneys and Ureters. ¶ In those that have hard Labour, I have let Blood, with great benefit. ¶ It were better in the sixth or seventh Month to extenuate and lessen the Fetus by a spare Diet and Bleeding, especially if the Woman be with Child of a Girl: for Girls when they are born, are always fatter than Boys.

Idem. II. Many things are commonly disputed about a Cesarean Birth. Baubinus his Opinion to me seems probable, who in his Preface to Fr. Roussetus his Book, proves by Reasons, That by no Art the Child can be cut alive out of the dead Mother: And though an Example be brought, (such as Crasus, l. 5. f. 371. mentions out of J. C. Arantius) he thinks the Mother was wronged, before she was dead, or it happened by chance; that is, the Surgeon by chance hit on that very last point of time, when the Soul was just going out of the Body. Sennertus seems not to be of this Opinion, and he says the Child has a Soul, which makes its Body to survive the dead Mother: And though he seems there to have given an Epitome of Roussetus, yet he contradicts not Baubinus his Reasons, nor according to his custom examines them. Horstius also in Fab. Hildanius, says the Child in the Womb lives not by its own Life, but its Life depends upon the Mother, which the Anatomy of an Infant does demonstrate, and he gives a further demonstration. Laurentius, fol. 324. Anat. demonstrates the same, where he had proved before, That a Child in the Womb neither breaths, nor breeds Vital Spirit, nor do the Heart and Arteries beat of themselves, and therefore all parts belonging to these things, as also all that belong to the first and second Concoction, are idle in the Child and useless; but all these things are communicated by the Mother. ¶ We must know, there are three cases, in which we may think of this Chirurgery. 1. When the Child is dead and the Mother alive. 2. When the

Riverius.

Rondeletius.

Idem.

Hæserus, Herc. Med. l. 7. c. 4.

the Mother is dead and the Child alive. 2. When they are both alive. In the first case it is not necessary to expose a Woman, who cannot easily be delivered, to manifest danger. Because, if it cannot be got out by Surgery, Nature has found other ways, by the *Anus*, *Navil*, *Groin*, as Histories do testify. The second case frequently happens, That the *Embryo* is condemned to darkness, before it see the light, and the hope of a living Soul dies with the Big-bellied Woman, as the Emperor, *l. 10. Digest. tit. 8.* speaks. By whose fault? Whether the Magistrates, as without whose consent that Operation cannot be performed? Or the Surgeons, who are afraid of *Vesalius* his fortune, who, when he was cutting open the Breast of one, whom he thought had been dead, found the Heart then beating? For it is necessary, that the Section be made almost in the very point, when the Mother expires, or while the Infant does still stir and leap. Nor does it any good to keep the Mothers Mouth open with a Key; for it is a vulgar error, to think that the Child lives by the Respiration of the Mother. The third case is when a live Child is cut out of the Mother alive: This is truly a *Cæsarean Birth*, but how dangerous this Operation is, any one may easily see. And though it must be acknowledged, there may happen a necessity of making such a Section, yet so many, and such Circumstances must be observed, that in the interim, in this hazardous case, no Man dares put his Hand to this Operation, for fear of the disgrace. For it is a thing worth the observation, that after *Rouffetus*, there was never found an Eye-witness, they were all Ear-witnesses, only except *Doringius*, who in an Epistle to *Hildanus* affirms, that in his presence the Womb, which was split into the Groin, was cut open, and a lively Infant was taken out, but that three days after cutting the Mother died: Which thing the Excellent *Rolfincius*, *p. 182. Dissert. Anat.* writes, happened to himself, who therefore dissuades this Operation in a living Woman. But I should earnestly persuade the cutting out of the Child, if it could be known by signs, that the Infant had broke its Cell, and got into the Cavity of the *Abdomen*, as Histories do prove.

Van Horne.

Rolfincius,
Diff. Anat.
l. 1. c. 13.

Rouffetus may boast, as he pleases, of a *Cæsarean Birth*, and may proclaim it secure from danger. I once attempted it, but was so terrified with the unhappy event, (for the Woman died within four days, taken with Epileptick Convulsions, when the Wound that was made, did promise well) that, while I live, I shall never advise this Operation, for fear that they who are decreed to die, should be reported to have died by the Physicians hand. But when I went about the work with Hooks and Pliers, neatly made, I never went away without accomplishing my desire, to the admiration of the By-standers.

Frid. Hofmannus.

III. In difficulty of Travel *Angelus Sala* gives *Mercurius Vita* (a very strong Vomit) to Big-bellied Women; and I have imitated him in the like cases, always with good success.

Barbette.

IV. Among Causes of a hard Labour, this is omitted by all Writers, that I have read, to wit, When the Childs Head, just as the Mother is ready to be delivered, pitches forward above the *Os Pubis*. This is a thing truly not undeserving the notice; for how much stronger the throws of Travel are, and the more the labours, so much less able will she be to bring out the Child, unless the Childs Head be put upwards towards the Mothers Back, and then be directed downwards besides the Bone by the Midwives hand.

V. *Riverius* his Judgment was, That a *Cæsarean Section* must never be practised, while the Mother is alive; because while she is alive, her delivery is never despaired of. He proves it by the instance of a Woman at *Mompeliev*, who had hard Labour,

and, when she was dead, the Child was found dead, but yet delivered; whence it is evident, that the Child may be born at the very last throws, when the Mother dies away, because of her pains, which she has undergone. Wherefore no wonder, if *Hildanus* procured sleep and strength to a Woman in Travel, who was just ready to beat her last, by giving her 1 drachm of *Confectio Alkermes* in 2 ounces of Syrup of Red Poppy, and Water-Lily, and Borage Water; and most happily relieved her. He said also, That a great Wound in the Skin cannot be cured without Sewing, nor in the Womb, which is moister than the Skin, and it has no proper Substrate Matter to breed a *Callus*.

VI. In a Woman that died after her delivery, the Womb was found torn by the coming out of the Child. The Midwives said, that her Womb had a very narrow mouth; a most violent Potion was given her by a certain Matron, to force away the Child, by which her pains and throws were so increased, and the Child forced so violently, that making its way by main force, but finding the passage too strait, it tore the Womb. From whence it is clear, that this kind of Remedy must not be used, but with great caution, and not till we have first considered whether the Womb be fit for it, and whether the Child lie right, before the Potion be given.

Hildanus,
cent. 1. 64.

VII. Sometimes the Mother goes with Twins, one of which is dead (and that always comes out the first) the other alive presently follows. Here I shall relate to you something of this nature, which perhaps may seem wonderful to you, that so you may know how to behave your self in delivering of Twins: For once it so happened, that in my presence, the Mother earnestly contended with the Midwife that the Child was alive, which she said, she felt to stir: on the contrary the Midwife urged that the Child was dead, from many outward signs. But at length it happened, when that Child was delivered, which was reckoned dead in the Womb, and the Secundine was taken away with it, that presently another live Child came out with its Secundine, although before, we could perceive nothing like it by outward signs. Therefore they were both in the right; for the Mother, when she affirmed she felt the Child stir, did not think she had had two in her Belly: And the Midwife, when she contended, that the Child was dead, did little think that another, must have followed. See, I pray, how variously things happen: And let it be a Maxim to you, not to use (as some are of the mind) an Instrument in delivering a Child, for nothing is more certain than the Hands, nothing more secure and gentle. But, to return to my former Story; When the dead Child was delivered entire alone, we searched, if by any signs we could find out, what had caused the death of the Child; whether it was the Mothers fault, or it came by some External violence. We took the Afterbirth entire, but corrupted, extended it with our Hands, and held it to the light. We thought we saw something livid and confused in the right side of the *Chorion*, such as comes after receiving a blow, so that the Veins in that part were altogether corrupt and broken. Then we concluded that the Child was killed by a blow about the Mothers Womb.

Car. Stephani,
nus, l. 3. c. 2.
Anat.

VIII. Although I never used Quick-Silver, yet I have often seen a scruple or half a drachm of it given by the Midwives of *Goritia* without any inconvenience. It is given alive, not killed: For that which is killed, sticks to the Stomach and Guts, and causes cruel Symptoms; yet it must be washed first in strong Vinegar, mixt with Salt, then it must be strained through a piece of Leather. For so they that use it, do cleanse it.

Matthiolus.

IX. When delivery is hindered through the Mothers fault, because the *Offa Pubis* and *Coccygii* are not so movable, by reason of Age; it is good to soften them by degrees with an emollient fomentation, which may very well be done two or three weeks before her time: For so the Cartilages that knit the said Bones, are by degrees softened, and the Bones themselves part more easily: For they scarce part asunder, but give a little, to make the passage for the Child more easie. Therefore the steam of Emollient Herbs boiled, received in a Perforated Chair, will be good. Such Fomentations do not only afford Women the foresaid benefit, that is, to cause the Child to come out with more ease and less trouble; but after the use of them Women are not so apt to be lame, when they are up again. Because then the said Bones do give way with less violence, and therefore the softened Cartilages do more easily return to their former state: Which when they are left hard, and parted by violence, and in a manner severed from the Bones, they do seldom return to their Pristine state, but they leave the knitting of the Bones more lax, and Women more or less subject to halt.

X. In hard Labour it is a case that deserves observation. Oftentimes the Child is born in a manner dead, but before the Navil is tied, by pressing the Blood in, as if it had received nourishment, it is restored to life again, which otherwise had died. D. G. Horstius told me, he was at Rome, when the Child was in the Midwife's Hand, and the After-burthen remained in the Mothers Womb, and she fell into a grievous Swooning; so that one while she seemed to expire, anon the Child was just dying, when immediately the Midwife called out, Wine, Wine; Greek Wine was brought, she warmed a little of it, and opening the Womans Mouth with a Strick she poured a Glass of it into her Mouth; so the Woman came to her self again immediately, and was as if she had risen from the dead, and at the same moment the Child began to stir finely, so that both survived, and all was well. Therefore in all Swooning we must not use Vinegar or Lavender Water, as is done commonly, but the best Aromatick Wine. Which also Doctor Sittardus judged should be done, unless the Swooning be with Vomiting; for then it is not amiss not only to give Wine, but to hold a Tasse of Bread and Vinegar to the Nose.

XI. We must not only use things that have a virtue to facilitate Birth from an Elementary quality, but such as have it from their whole Substance, such as the Eagle-Stone, which when I had ordered to be tied to the Thigh of a Woman in Travel, after it had been there a while, a huge monstrous Membrane came away with much ado: but as soon as it was come away, I ordered the Stone to be taken off; for if it should have tarried long on, it would have drawn out the Womb by its potent virtue; which I found in the Wife of N. to whom, being in hard Labour, when the Women had tied a great Eagle-Stone to her Thigh, and after she was delivered, did not take it off her Thigh, through carelessness and forgetfulness; within a few hours her Womb came out, and killed the poor Woman.

XII. One Cause of hard Labour, omitted by most, yet often taken notice of by *Aranus*, consists in the bad formation of the *Offa Pubis*, which are not aptly disposed, that is, broader than they should be, and flat on the outside, so that within they are rather gibbous than hollow, and come near to the *Os Sacrum* and *Coccyx*, and are so strait, that the Child has no way to get out. Then the business must be committed to Nature, seeing there is nothing that the Physician can do.

XIII. Things that promote the Birth do operate, as they either comfort Nature, wherefore a draught of Malmsey Wine is good, and Volatil

Cordials, and all Spices: Or they stimulate, and make the motion quicker, and they are watry, and not altogether void of volatility, such as Pennyroyal Water; Or emollient, as Water of White Lillies; Or Diuretick, as an Emulsion of Gromil Seed and Violet Seed with some appropriate Water: Hither belong Oily things, as Oyl of Amber, Amber also it self; and Saline things, chief among which is *Venice Borax*: Or they allweage and comfort the Nervous Kind, the painful irritation whereof renders the Labour much more difficult: Hither belong Cinnabarines.

XIV. But things to facilitate Birth must not be given, unless the Child be near, and Nature want help. To which is requisite not only, 1. That the space of nine months, or 280 days be fully completed; but also, 2. That there be true pains of Travel; and 3. Which is chief of all, That the Child be near the Birth, for unless the Aperture expand it self, it is in vain to irritate and sollicit Nature, when she does not act, since thereby she as hitherto acting well, is disturbed, so that endeavouring to eject the Child unseasonably, that is, by giving this Provocative, she puts it in a bad posture, and causes a Preternatural difficult Travel: As otherwise the Midwives themselves also, do in this very much offend, while they encourage the Woman too soon, provoke, force, and set them on a Stool.

XV. The Midwife cannot foresee, much less correct, all the vicious postures. Indeed it is easily ordered in a Book, Change, amend the situation of the Child; but in so narrow a place it is scarce possible to do it quickly and successfully: For how can she amend what she does not see? You will say, Can she not feel? I answer, in so narrow a room she may be mistaken in her Judgment. How often do Midwives, judging only by feeling, mistake the Shoulder or the Elbow for the Head? Then how can the Midwife help *Agrippa's* (or Children coming with their Feet foremost?) What if the Child come double at the Hips? How can she help this ill posture?

Medicines especially made use of by eminent Physicians.

1. Amber given to Women with Child hastens the Birth wonderfully. A certain Physician gave 1 scruple of *Borax* dissolved in a Decoction of Motherwort or Savine, to Women in hard Labour, and he did wonders: for quickly the Child came out alive or dead.

2. Let the Patient tie the Root of Gourd to her Kidneys, and she will presently be delivered: After she is delivered, let it be taken off immediately, that the *Matrix* fall not out.

3. If a Woman before her Travel drink Oyl Olive, it will prove easie, and she will not be troubled with after-pains. They say, Water of Adders-Tongue does the same.

4. To cause Pain, (for the more easie delivery) Take of warm Water 2 ounces, Honey what is sufficient. Mix them. Give this Dose at any time, when there is occasion.

5. This was communicated to me for an Infalible Secret; Take Nettle-Roots; boil them in Wine; and in a draught of that Wine put of powdered Cinnamon 2 drachms, Saffron 1 scruple. Let her drink it.

6. This is an excellent Secret, and never fails in hard Travel: Take of the Seed of Lavender half a drachm, Plantain, Endive, of each two scruples, Pepper one scruple. Make a Powder. Take it in the Water of Endive and Woodbine, of each four drachms.

7. This has been found to be excellent by long Experience: Take of the Bark of *Cassia Fistula*,
R x x
Alo-

Wedelius.

Idem.

Ammannus,
Med. Crit.
p. 559.

Baricellus.

Bayrus.

Borellus.

Claudius.

Corbous.

SimonPaoli.

Sylvius de le
Boc.

Johannander.

Valleriola,
lib. 10. obs.
30.

Ferdinandus.

Eustach.
Raudius.

Asarum, of each one drachm, Cinnamon, Saffron, Savine, of each half a drachm. Make a Powder. The Dose is one drachm in Chicken or Pigeon Broth.

Rulandus.

8. *Of Night Heracium*, 16 drops were given to a Woman in Labour, and a dead Child with the After-burthen came away within an hour, the Mother who had hard Labour being safe.

Sennertus.

9. This Powder has been tried by Experience: Take of White Dittany, Amber, of each one drachm and an half. Make a Powder. Give half of it in White Wine for one Dose.

Pectoris & Pulmonum vitia in genere, or, Diseases of the Breast and Lungs in general.

(See Thoracicks, Book XIX.)

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I. **T**Hough Galen says, (1. Aph. 23.) That in great Inflammations, and especially burning Fevers, Blood is to be let to swooning away; yet it is very dangerous to bleed to that degree in Diseases of the Spiritual Parts: Wherefore, though we ought to bleed plentifully, and even almost to fainting away, yet we must not proceed so far as till the Patient swoon, which the

skillful Physician will understand by feeling the Pulse.

II. Evacuation out of the Hemorrhoidal Veins has great consent with the Breast.

III. I do not approve of Evacuations in Pectoral Diseases from a Catarrh; and those Physicians who are but indifferently learned, and vers'd in the practice of Physick know the Reasons: For what good do Evacuations do as to the Concoction, or Evacuation of the Matter out of the Breast? What do they do towards derivation, seeing they move and roll it the more? What do they do as to the strengthening of the Head and Stomach? What towards the Correcting of the Temperature of the Liver? I know something may be said against me: but I have found by Experience that in Pectoral Diseases it is most profitable to abstain from Purging Medicines. Thus *Crato* in *Scholtzius* conf. 4. yet he uses them in difficulty of breathing from a Catarrh. *Foris*, conf. 7. cent. 2. writes thus: Let strong Purgation follow Lenients and Preparatives: for it is not to be queried whether Purgers draw from the Breast or no; for besides that they may draw forth Humours by the *Vena sine* part; whilst the whole Body is purged part after part, the Breast it self is also purged; for there is one and the same Conflux, one Conspiracy, all things consenting. Indeed though they be not proper in respect of the Matter that is pass'd out of the Vessels, yet they bring forth the antecedent Matter at least, whether it flow from the Brain, (seeing 'tis manifest that the stronger Purgatives draw from thence) or through the Pulmonary Artery into the Lungs, which has convey'd thither the Cacoehymic mixt with the Mass of Blood.

IV. Their Opinion ought to be rejected, who understanding that Manna is friendly to the Breast, give it to those who have their Breast loaden with Crudities, not seeing that Crude Humours are made more thick and unapt for Concoction when the Serum is discharged: I have often observed such to be thrown into a very bad state by the giving of Manna. Nature desires that thick Humours should be made fluid; but those who give Manna, or Scammony, separate the Ichors, or watry part, and make the remainders of the Humours thicker. *Johann Baptist Montanus* considering this, gives Manna with the Cream of Tartar for the bringing forth of the thicker Humours. I lately saw the efficacy of Manna given after that manner in an Asthmatical Woman, whose Lungs being turgent with Serum, she was cured the same day, a great quantity of Serous Humours being carried off.

V. Vomiting is not good, if there be a solution of Continuity in the Lungs: but if they be full of thick and Viscid Humours only, 'tis an excellent Remedy. Hence 'tis false, That Vomiting is hurtful in every Disease of the Breast. It often happens that a slimy tough Matter lies a Finger breadth thick upon the upper side of the Midriff, which kills the Patient unless it be taken away by Vomir. So died a certain Landgrave of *Hessen*, in whose dead Body, being opened, there was found such a Matter. When an Empyema follows a Disease of the Lungs, it shall be cured by *Paracentesis* or Tapping, or by purging off the Pus by Stool and Vomir: Which I remember was done a few years ago by an Empirick by a particular Decoction, by the help whereof a Patient that was esteem'd to be incurable by several Physicians, being affected in his Breast, and wasting away by degrees, was cured very well in a few weeks, and still continues well. Let none censure that rashly, which he knows not the reason of. It is clear by Experience, that from a violent straining to Vomir, the expulsion of what is contained in the Wind-Pipe is promoted; except in Spitting of Blood, wherein Vomiting is always dangerous.

P. Sallius Di-
versus com.
in lib. 1. Hip.
de Morb. t.
60.
Foris, conf.
50. cent. 2.

Sanctor.
method. l.
5. c. 10.
Martian. 4.
de acut. vict.

Walrus, m.
m. p. 56.

Fr. Sylv.
pract. l. 1.
c. 24.

Idem, c. 23.
p. 29.

VI. One taking the Flowers of Antimony of a Mountebank fell into an Apoplexy, during which he fell into a great Salivation, so that he quickly emptied by his Nose and Mouth a great deal of frothy Phlegm. His dead Body being opened, the Region of his Breast, his Stomach, and Head were found full of such like Matter. Whence gather, That as *Antimonium Diaphoreticum* being well prepared, is an excellent Medicine for the Lungs; so being not as yet deprived of its Arsenical Sulphur and Mercury by Calcinations and Solutions, is a very great Poison.

VII. We must abstain from *Astringent Clysters* when there is a brisk Expectoration; for Expectoration is hindered by the virtue thereof, the Matter being drawn downwards: and in such case there follow anxiety, inquietude, and divers other Symptoms.

VIII. According to *Hippocrates*, l. 3. de vit. acut. v. 68. Medicines that incise and attenuate much, such as *Oxymel* that is very sharp, are to be abstained from in Diseases of the Breast, when the Patients through weakness cannot Cough up: for the Matter by such Medicines is not only made more tough, and so the harder to cough up; but being deterged from the sides of the Vessels, it slides into their Cavities, and so causes a greater suffocation (the passages for the Air being stoppt) than when it cleave to the sides of the Wind-Pipe.

IX. Amongst the conveniences of *Pisum*, *Hippocrates* (in acut. l. 29.) reckons these, That it is fluid, and sticks not to the Parts, nor carries in the passage that goes directly to the Breast: from whence we may gather, that he takes away the use of all Lohochs, because they cleave to the Parts, and cause Anhelations in the Inflammation of the Lungs, Pleurisy, and Asthma. For the Ancients used Lohochs only for sore Mouths, where it was necessary the Medicine should tarry some while.

X. The same are not good when a Fever, and a Cough or other like Distemper of the Breast come together. Thus in Catarrhal Fevers, in the Small Pox and Measles, and especially the Pleurisy and Peripneumony, Lohochs have no place. Nor are those to be listened to, who in a Pleurisy, especially in the beginning thereof, commend *Spec. diatrachacanth. frig.* and such like, which are quite opposite to the indication and motion of Nature. So that *Heurnius's* Advice (in Meth. ad prax. p. 313.) is rather to be followed; nor does *Helmont* write amiss in this case, That Syrups and Lohochs have not benefited one of a thousand, and therefore we ought to persist no longer in this Miry Track.

XI. Some Physicians do ill in prescribing *Lambitives* at the first Visit, (such Physicians are like Women) for the Matter that is in the whole Body forbids them. For a Lohoch is given upon the account of a Cough; now by a Cough the Lungs, Breast, and Pleura are agitated: and therefore if the Body be full of Humours, they rather hurt, by the attraction of new Matter, than profit. Wherefore they ought not to be prescribed till after Bleeding and Loosening the Belly.

XII. There is need of some Moderation and Circumspection in the use of *Lambitives*, lest such sweet things, while they stay in the Stomach, turn to Choler; or being carried to the Liver, cause Obstructions there. We see that by the too frequent use of *Lambitives*, those who labour under Pectoral Diseases do sometimes fall into a Dropsy: for there is but a small part of such Medicines that slides into the Lungs, the greatest part going to the Stomach and Liver.

XIII. That Admonition of *Hippocrates*, lib. de vit. acut. is very worthy of notice: Sweet Wine in such as it makes thirsty, helps Expectoration less than other Wine. Therefore though sweet Wine do not itself facilitate Spitting, yet in such as are Choleric, or labour under a Choleric Cacochy-

mie of the Breast, as a Choleric Pleurisy, Peripneumony or Destillation, namely in such as it makes thirsty, it brings forth less Spittle than the Vinous, because it heats the Liver, increases Choler, dries the Lungs, and makes the Disease drier. Which same thing is to be observed indeed in all other sweet Potions and *Lambitives*; nor must we without distinction press *Lambitives* upon all who we desire should Cough up easily; for in some (namely such whose Breast is very hot, and their Liver Choleric) the Phlegm will come easier up by abstaining from all such things, and allowing only Water or a Decoction of Barley. As for my self, I give to such only warm Water to concoct the Phlegm, and find a very good effect of it.

XIV. That such things as astringe moderately, are necessary, and not hurtful, in Diseases of the Breast, especially being mixed with other things, appears from the composition of the Syrup of *Lykorrhize*, wherein *Mesue* puts Rose-Water. Now such things are profitable, in as much as by condensing and strengthening the substance of the parts of the Breast, they hinder the unprofitable Humours, that are sent from other parts, to be so readily received; and such as they have received, whether they would or no, by contracting themselves, they expel the more strongly. Thus *Avicenna*, in imitation of *Hippocrates*, 3. de morb. prescribes a Wine of Sweet Pomegranates for the Peripneumonick and Pleuritic; upon which account he is blamed by some for prescribing an Astringent where there is occasion to dilate: for according to *Galen*, 8. x. r. even sweet Pomegranates bind in some measure: though some think it to be prescribed upon the account of the Looseness that sometimes happens in these Diseases. It may be added, That moderate Astringent helps the Penetration of the rest.

XV. How profitable a Decoction of Turnips is in Pectoral Diseases, loosening the Matter collected in the Breast, I have found by Experience, and therefore I earnestly recommend it. Take Turnips and pare the Rind off them, slice them, and pouring Water on them boil them a little; throw away the first Decoction, and boil them again in fresh Water: Press out the Juice, to which add a little fresh Butter and Sugar Candy.

XVI. Nothing is more difficult in Diseases of the Breast, than to bring the Medicines to the place affected, for through the length of the way they hardly do any good: for the greatest part of them (if not all) slides down the Gullet into the Stomach, and before they reach the Lungs, their virtue is either lessened, or altogether destroyed. It seems more advisable therefore, that Pectoral Medicines, whether Lozenges, *Linctus*, or others, be held a good while in the Mouth, that they may slide down leisurely by the sides of the Larynx: yet this is but a slow kind of Remedy. That Medicines may be received plentifully and speedily into the Lungs, we must make an artificial use of Respiration: A Decoction of Vulnerary, Pectoral Herbs and others, according to the scope of the Physician, is to be prepared, the Vapour whereof let the Patient continually receive, together with the Air, in Inspiration: for thus the Steam being carried to the Lungs in its entire virtue, and by a short way, shall cure the Diseases thereof. Let all the Air be thus infected to the benefit of the Patient; and you need not with *Galen* sail to Egypt, your Chamber may become an Egypt for you. I think the Diseases of the Breast, Head, and Lungs can be helped no way better than by Vapour. For as we relieve the thick Guts by Clysters, the Stomach by Vomits, the Kidneys by Diuretics, because these Remedies reach to those parts; so it seems are the parts serving for Respiration to be helped by Vapours; for nothing else is carried entire into those parts. As for my self,

P. de Sorbait, M. C. an. 1672. obs. 270.

Merc. l. l. de ind. med. c. 3.

P. Martian. comm. in loc.

Heurnius, comm. in loc.

Capivacc. pract. l. 2. c. 3.

Crato, conf. 81. apud Scholtz. Gabelchover. cent. 3. cur. 85. Montan. conf. 126.

Valles. com. in l. de vich. acut. p. 107.

Crucius de Quacris, cent. 4. p. 13.

Crato, conf. 21. apud Scholtzium.

Tho. Barth. cent. 4. Hilt. 88.

I often use Vapours for the Diseases of the Breast and Head, setting Kettles full of sitting Decoctions by the Patients Bed side, or using Suffumigations upon Coals: for Concocting and Inciding Vapours may be prepared as the matter shall require. Wherefore it will often be convenient, whilst Fomentations are applied outwardly for allaying of Pain and discussing of Humours and Wind, to receive inwardly the Vapours from Sponges dipt in the Decoction, for concocting or drying. Yet this will not be always convenient; for if difficulty of breathing happen thereupon, we must desist.

Vallef. de
vict. acut.
p. 49. de
evaporat. &
suffumig.

XVII. Without doubt *Tabaco* given in Potion does as much harm to the Stomach and Guts, as it does good to a moist and cold Brain. But 'tis some Question, Whether the Smoak of *Tabaco* offend the Lungs, because it is an hot Plant, yea acrimonious and twitching, either naturally, or by art; namely from the Pouders of *Euphorbium*, *Bastard Pellitory*, *Pepper*, or other acrimonious Spices, which are sprinkled betwixt its Leaves by Cheating Fellows, as they are made up into Rolls: by the Vapour of all which 'tis likely the Lungs are no less offended, than the Brain is, when a Man is made to sneeze by the Pouders of *Horse-Rhadiſh*, or *Pepper*. For as its immoderate heat does exhaust the Radical moisture; so its cloudy Smoak obscures the illustrious spirit of our Life, yea, it suffocates the innate heat so evidently, that like *Tabid* or *Consumptive* People they are waſted with a continual Cough or shortness of Breath.

Nicol. Tulp.
obf. l. 1.
c. 6.

XVIII. I believe that a Catarrh does not only come to the Breast by the Lungs, but also from the whole Circuit of the Veins: witness *Galen*, 2. de fac. nat. who says that all Superfluities flow upon a weak part. Wherefore *Diureticks* are good in such case, because the Matter descends from the Veins, and there is a great consent betwixt the Veins and the Breast. Therefore *Diureticks* are profitable for the Lungs and Diseases of the Breast.

Montan.
conf. 145.
See the title
of Respiration
hurt,
Book 15.

XIX. Those things which bring Matter or *Phlegm* out of the Breast, are prepared divers ways, and are used sometimes in the form of a *Decoction*, sometimes of a *Mixture*, sometimes of a *Loboch*, and sometimes of *Lozenges*. And 'tis good to hold them for a while in the Mouth, that passing leisurely to the Fauces or Throat, a good deal of them may go down by the Weazand, and so may be mixed in a greater quantity with the *Phlegm* that is to be incided. But that which we swallow, may also by a longer way return with the Blood to the Lungs.

Sylv. dele
Boe. m. m. c.
18. sect. 25.

XX. *Hippocrates* uses sometimes sweet, sometimes harsh Wine in Diseases of the Breast. Sweet Wine is not so well allowed of before Expectoration begin, because it does not raise a Cough, whereby the Purulent Matter is discharged: Therefore harsh Wine is then proper, because by irritating a Cough, it causeth Expectoration: but he abstains from it when the Patient Coughs up freely, for then sweet Wine is more convenient to make the passages glib, and to expand the Wings of the Lungs.

Sinibald. l. 4.
Antiph. 14.

XXI. I do not well approve of *Pectoral Ointments*; for though they help towards expectorating of the Matter which is at present lodged in the Breast, yet they make the parts more loose and subject to Fluxions.

Crato, conf.
8.

XXII. I use the Flowers of *Brimstone* in inveterate Diseases of the Lungs with no bad success: but *D. Job. Crato* hath frightened me from the use of them, who disallowing of them endeavours to shew, That something of a more subtil Arsenical Poison is still contained in them. But seeing in strong Distempers strong Remedies also are to be used, and I should hope that by often washing of them with the Water of *Scabious*, *Speedwell*, or the like, that Poisonous quality may be taken away, or at least so corrected as not to hurt, I would not

in that case be against the use of these Flowers. Now half a scruple or a scruple of them may be given in one of the forementioned Waters, adding *Spec. Diarr. Simpl.* in the same quantity; or take half a drachm of each of these, and with two ounces and an half of Sugar dissolved in proper Waters make *Rosula*, whereof let one or two melt in your Mouth often.

Joac. Camer.
rar. in citta
medic. Hor-
nungi Epist.
118.

XXIII. The Head being dried, and the Lungs themselves in some sort, the drying and strengthening of them may be perfected by *Sulphureous Waters*, drinking them for twelve days with a loosening Vehicle. For there can be no Remedy more excellent in art; yet it is not proper till the Head be first dried, seeing it ascends thither, fills and tuses it, and so increases distillations; yet when the Head is dried, it dries it yet more without any inconvenience attending.

Joh. Ray-
mund. For-
tis, conf. 13.
cent. 2.

XXIV. The Substance of the Lungs is soft and spongy, therefore is it subject to defluxions above other Bowels; whether those come from the Brain, or from the *Viscera* by the mediation of the Heart. For when the Head does destil Rheum upon the Lungs, and the Liver supplies an impure Blood to the Heart, which the Heart pours out again into the Lungs, their Substance is thereby infected, but that taint flows not from the Heart, but from the Distemper'd and ill Condition'd *Viscera*, which send impure Blood to the Heart, whose fault the Heart cannot correct but by many Circulations. Now the Lungs cannot receive Humours from the Head without a Cough; for if this be wanting, they suffer only from the Blood of the Heart: for the Lungs alone are supplied with Blood from the Heart, receiving Vessels therefrom, and not from the *Cava*.

Riolan. en-
chir. Ang-
tomit. l. 3.
c. 6.

XXV. Medicines that raise a greater fermentation are not to be added to *Ecloges* or *Lambitives*. Thus 'tis well known that the Flowers of Sulphur, and the Milk of Sulphur (so called) are excellent Pectorals, and yet 'tis advisable to give them rather in any other mixture than that of *Lambitives* or *Electuaries*: The same may be said of Salts, which 'tis better to omit also, because they are not so friendly to the Breast. For 'tis certain by Experience, that the mixing of Sulphurate Remedies with sweet, does in a special manner cause a fermentation: whence a resolution and *impetus* being made, such *Lambitives* (which also of themselves are apt to ferment, alter the manner of other sweet things mixt with what is Heterogeneous) incline to the out-parts of the Vessel, so that the Vessel seems always full, though every day something be drained thence. ¶ *Lambitives* are naught for the Stomach; for sweet things, as *Macrobium* says rightly, are enemies to Concoction; for by the continued use of them especially, they loosen the sides of the Stomach, dull its heat, and impair its ferment; so that *Montanus* himself (*Conf. 32.*) rightly admonishes us not to give them but on an empty Stomach, lest Concoction be hindered: Hence they destroy the appetite: So that where there is a weakness of the Stomach, especially a flagginess, they are more sparingly, or not at all to be used, but always when we use them we must have regard to the tone of the Stomach.

Wedel. de
medicin.
compol.
140.

XXVI. *Lambitives* do not bind safely, for they ferment the Humours, and by their proper sweetness do rather smooth, lubricate, and mollifie, than bind: so that we must not wholly trust to these in salt, acrimonious, and thin Catarrhs, nor in Spitting of Blood it self: whence it may be noted as a Rule, That *Lambitives* are indeed proper only for the Lungs, but yet not they alone for the Lungs alone, and that by altering.

Idem, p.
143.

XXVII. The simple Flowers of Sulphur are better than the Compound. As (*entia* or) several distinct Medicines use almost in every case to be

Fr. Sylv. m.
m. l. 2. c. 18.

be multiplied by Chymists without necessity; so is the same observed in the Flowers of Sulphur: for some prepare them with Aloes, Benzoe, Saffron, Myrrh, the Colcothar of Vitriol, Nitre, that they may look white, with common Salt, &c. and then give them among their *Arcana*; but generally with light and small success: For what does Colcothar communicate, but a Corrosive Acrimonious Quality? What afford Aloes, Saffron, or Myrrh, but an Empyreuma? For these have no quality to fly away or be sublimed, and they are burnt up the more by a double Fire as it were: And so great a change being made, the virtues which we expected cannot but fail also: so that 'tis better to join other proper things to the Flowers themselves of Sulphur.

XXVIII. As often as *Acids* are used to cut Phlegm, so often they are not to be given alone, but mixt with sweet and Sugared things in a small quantity, lest, if they should be given more singly, they should by their Acrimony too much irritate the Lungs to cough, and so should do more hurt than good.

XXIX. When the *Serum* is too *Acrimonious*, some things are to be used which may temper it, because through its Acrimony it does not only by its twitching cause frequent Coughing and wearies the Lungs; but also frets the Coat of the Wind-Pipe, and by degrees creates an Ulcer in the Lungs. Its most frequent Acrimony is a *Salt Muriatick*, more rarely such as is very acid: its sourness uses to cause singular disturbance. The *Salt Muriatick* Acrimony of the *Serum* is temper'd and blunted in part by the *Incrassates* to be presently mentioned, which by their Emplastick virtue do lenifie that Acrimony; and this they do more effectually if Opiats be joined with them, as the Pills commonly known, called *Pil. de Cynoglossa*, and *de Syrace*, do testifie, which are very well fitted for this purpose, and might be yet more fit if by adding Sugar they were made up into Tablets or Troches, and held in the Mouth: for so a far greater part of them passes to the Lungs, than when they are made up into Pills and swallow'd; though even so they are likewise observ'd to be very effectual, though every Caviller is not presently satisfied in the way by which the virtue of the Medicine is transmitted to the Lungs. We therefore recommend the said Pills *de Cynoglossa* and *de Syrace* for Salt Muriatick (or briny) Humours that are flown into the Wind-Pipe, and ought to be expectorated thence, in as much as they both temper their salt Acrimony, and lessen their too great fluidity, and so procure to them a Consistence convenient for Expectoration, and for Expulsion by Coughing; whatsoever several bawl to the contrary.

XXX. The *Serum*, be it of what taste it will, ought all of it in general to be *incrassated*, that it may the more easily be Expectorated; for otherwise it escapes the violence of the expired Air, and can be expelled but slowly, and by much Coughing. The *Serum* is incrassated by Gum Tragacanth, Gum Arabick, the Roots of Marsh-mallows, Comphrey, &c. of which, with Sugar, Troches may be made, which being held a good while in the Mouth, and by little and little dissolved by the Spittle, do leisurely tend to the Wind-Pipe, and thicken therein the over-fluid *Serum*, making it fit to be the easilier expelled by the help of the Air in Expiration.

XXXI. As to Medicines correcting an Humour offending by a more pure acidity, and helping Expectoration, they are the same which correct the Salt Muriatick *Serum*, and moreover such as *concentrate* and *infringe* Acids, such as Crabs Eyes, Pearls, Corals, Chalk, all sorts of sealed Earth, &c. But because the Wind-Pipe uses to be fretted sooner and forer by an acid *Serum*, 'tis necessary

not only to use the Remedies that more effectually correct it, but they must moreover be so prepared and administered, that a good part of them may be carried into the said Wind-Pipe. Wherefore the most convenient form will be *Troches* and *Lozenges*, that they may the longer be kept in the Mouth, and carried more plentifully to the Weazand, and may partly therein and partly in the Mouth imbibe and concentrate the acid *Serum*. A *sover Serum* shall be corrected by Medicines that amend it, such as are among the vulgarly known, *Castor*, *Asa fetida*, *Carabe*; among Chymical Remedies, all sorts of *Salts* that are truly *Volatil*, the most effectual whereof I have found to be the Spirit of Sal Armoniack, the Oyl of Amber, Mace, &c. Let the ingrateful things, as *Castor*, *Asa fetida*, be given in the form of Pills.

Idem.

Pectoris dolor, or Pain of the Breast.

The Contents.

An but Pain of the Breast cured by a Seton in the Part. I.

A wandering Pain ceasing by the use of a Decoction of China. II.

A Pain of the Sternum proceeding from a Bilious Humour included in a peculiar Membrane. III.

I. **T**HE most Noble Lord G. & B. being a Man of a very Cholerick Temperament, was long vexed with a most troublesome Pain in the left side of his Breast, which no Topicks or other Remedies could assuage. Himself proposed the passing of a Seton in the part, which with much ado his Physicians consented to. Calling L. S. a skilful Surgeon of Geneva, himself with his Fingers took hold of the Skin of the part affected, and raised it up strongly from the subjacent Muscles: then the Surgeon thrusts a Needle through it, being threaded with a Seton as thick as ones little Finger, and from the upper to the lower Hole there was six or seven Fingers Breadth space. A while after a virulent yellow *Serum* flow'd out in great plenty, which being exhausted the Pain remitted. After six weeks this Noble Person pull'd out the Seton without any return of the Pain.

II. Mr. N. being fifty years old, of a sanguin Complexion, returning out of Italy from the Wars, complains of cruel Pains, afflicting him every Night about his first Sleep: they begin in the left Side, reaching at the same time to the fore and hinder part of the Breast, to the left Side and Shoulder-Blades, with that violence as to awake him; nor can he continue to lie in any posture, but is forc'd to rise: The Pain continues till the morning, and then ceases, and is quiet all the day. He had been troubled therewith for two months, and had used no Remedy. Another Physician thinks that these Pains proceed from a thin Catarrh falling upon those parts in the night, in which season the Phlegmatick Humour is moved: I am of Opinion that they proceed from Wind, which is raised only at those hours by the heat being made more intense from Concentration during sleep: The Matter out of which it is raised, is a puddle of bad and crude Humours collected in the Stomach, Mesentery, and about the Liver, bred from a bad Diet in the Camp; whereby the Concoction of the Stomach is weakened, and thence are *status* sent all about, being raised from the bad Humours: When Concoction is finished, the *status* are no longer transmitted, and therefore towards morning the Pains cease. For Cure I prescribed first an universal

S f f

Eva-

Wedel.
Pharm. p.
137.Fr. Sylv. m.
m. l. 2. c.
18.Sylv. de le
Boc. prax.
lib. i. cap.
19.

Idem.

River cent.
2. obf. 8.

Evacuation by Apozems and Bleeding; afterwards a Decoction of China for fifteen days: by the use of which things the Distemper lessened by degrees, and at length was wholly removed without other Remedies.

III. I have known one or two troubled with a Pain in the upper part of the Breast-Bone, not very cruel, but of long continuance, which intermitted indeed daily a good part of the day, yet so as that there was always some troublesome sense remaining. It caused no difficulty of Breath, nor was it accompanied with a Cough; yet it was somewhat increased by strong Inspiration and deep Sighs, as also by a sudden lying along upon the Back and much bending of the Head backwards, and likewise by yawning and stretching. It always continued fixt in one place; yet it sometimes extended it self to the neighbouring parts of the Breast, and towards the Axill-pits. I thought this Pain proceeded from an Humour fixt between a peculiar Membrane, (for that which is common to the whole Breast, called *Pleura*, recedes a good space from the Breast Bone, while it forms the *Mediastinum*) and the very Body of the Breast-Bone, on that side next the Cavity of the Breast, in no great quantity, but such as was very Acrimonious or Malignant, yet Bilious, the Parties being in the vigour of Age, and of hot Bodies, and very subject to Diseases from Choler. The Cure confirmed this Conjecture, being performed chiefly by repeating Purgers of Choler: I also used fomentations of Anodynes and Relaxers, and laid on a Plaister of Olibanum, Virgin Wax, and Burgundy Pitch, which is of notable efficacy to draw forth gently any sort of Acrimonious Humours that lie deep, and to dissipate them by degrees.

Arnold. Boottius de affect. omiff. c. 12. See Sect. I.

Pectoris & Pulmonum vulnera, or Wounds of the Breast and Lungs.

The Contents.

- When purging is hurtful. I.
How to cure Wounds that penetrate into the Cavity. II.
The necessity of Tents. III.
Whether Injections be hurtful. IV.
Let them not consist of bitter things. V.
Where Paracentesis or Tapping is necessary, 'tis not to be omitted for fear of a Flux of Blood. VI.
When the Blood stops, by what art it is to be made to issue. VII.
Wounds near the Heart are not to be closed sooner than others. VIII.
The opening of an Imposthume is not to be delayed. IX.

Scultet. obf. 43.

I. Such as being wounded in the Breast, have Pus contained in the Cavity; while it is a purging out by the Wound, there is no better Remedy than not to purge the Body: for if a Purge should be given, all the Humours would run towards the Guts, and the Body would be wasted, whose wasting bad Symptoms will follow.

II. I have often seen Wounds of the Breast penetrating into its Cavity, yet without any hurt of the Internal Parts; which Wounds are indeed of two sorts, one which hurt the Intercostal Vessels, out of which the Blood flowing plentifully, issues into the Cavity of the Breast; the other, wherein the Vessels being not hurt, pour no Blood into the Cavity. The first sort of Wound is to be kept open; which method of Cure all Writers of Physick propound: But if there be no signs of Extravasated Blood in the Cavity, namely, if the usual Symptoms be wanting, amongst which are a Fever,

much Coughing, a weight upon the Midriff, and other such like, then putting a very short Tent into the Orifice of the Wound, wetting it with the White of an Egg, and laying a Linnen Cloth over it dipt in the same, with Bole-Armene and *Sanguis Draconis*, I gently compress the wounded part with a Swathing-Band: and the next day, throwing the Tent quite away, I lay on a Cere-Cloth of Cerufs; by which things I make my Patients sound in seven or eight days. By the same method I also cure Wounds of the Breast that only penetrate the Muscles thereof, though an Hands breadth long. ¶ Penetrating Wounds made in the upper part of the Breast, so that the Matter that is collected within cannot so conveniently be discharged forth, degenerate into an Empyema, according to the general Opinion: On which account I have made Incision in some betwixt the fifth and sixth Rib, and thereby have evacuated the Matter and cured several. See Instances in *Scultetus*, obf. 43. & 59. ¶ I have observed, that as oft as the Matter is quickly discharged, namely, in a days time at furthest, the Patients presently recover, the Matter flowing no longer out by the Wound, and which is strange, the Fever moreover ceasing, which is continual while the Matter stays in the Cavity of the Breast: Yea, this is thought to be a Pathognomonick Sign, That when the Patients are free from a Fever, there is no Matter in the Breast; and does indicate, that the Wound is to be presently closed up: Whereas on the contrary, when the Matter issues out by little and little, all such die; because by its delay the Internal Parts are Ulcerated, Pus is increased, and the Ulcers and Fever grow daily worse and worse: Which therefore must be marked by those that are employed in these Cures; namely, that if the Pus be not evacuated in a short space of time, they see to drain it forth as quickly as they can by Medicines; for which purpose I give either Barley-Water or Water and Honey, which deterge it by little and little, and make it fit for Evacuation, not without the help of Nature expelling it: which Remedy the more strong need not, who in a few days discharge all the Purulent Matter, and are cured, unless this Evacuation be prolonged, and then they dye. See *Parvus*, lib. 9. c. 31. *Nic. Massa* tom. 2. Epist. 11.

Marchet. obf. 41.

III. *Felix Writts* a Surgeon utterly rejects Tents in Wounds of the Breast, and determines, That Pus is self, Blood, or other Matter collected in the Breast may be fully evacuated by Sweat, Urine, Stool, or other ways: But though I deny not that Patients are in great danger, when unskilful Surgeons tie not the Tents with a Thread to hinder them from slipping into the Cavity of the Breast; yet I see no reason why the use of them is utterly to be rejected; seeing otherwise Nature, which expects assistance from Art, cannot discharge the Superfluities.

Scult. obf. 43.

IV. *Cosmus Sloranus*, a very good Surgeon, wholly abstained from Injections that are made by a Syringe: which he bids us observe in all Wounds and Ulcers either in the Breast or lower Belly: for some part of the Injection might easily glide into the vacuity of the Breast or Belly, and grievous Symptoms, with great danger to the Patient might be raised thereby. Yet *Scultetus* used them with very good success, as appears from his 51, and 56 Observations.

Horst. ap. Hildan. cent. 3. obf. 36.

V. One being wounded in his Breast, when I had poured into the Wound a very deterring Injection of Wormwood, Centaury, and *Alues*, there rose up such a bitterness into his Mouth, with a Nausea, that he could no longer endure it. Then I called to mind what once I had observed in one who had a *Fistula* upon his Breast. Therefore when I considered that such bitter things are apt to be received into the Lungs, and to rise from thence up into

Fabr. Hild. cent. 1. obf. 63.

into the Wind-Pipe, Throat, and Mouth, I declared that I would never more administer such bitter things to my Patients; for there proceeds far greater trouble than fruit and benefit therefrom.

VI. One was wounded in his Back, the Sword penetrating as far as to the left Pap; and though a great deal of Blood issued out of the Wound, yet on the third day he breathed difficultly, and had a very great pain near his Midriff. Therefore his Breast was opened betwixt the third and fourth Rib, that the Matter contain'd in his Breast might be evacuated: When the Perforation was made, there flow'd out of the Wound but three or four drops of Blood. Which I would have to be therefore noted, because some say that a great flux of Blood is caused through cutting the Intercoastal Vessels. Yet I will not deny, that sometimes, especially in the Choleric, there follows such a flux of Blood into the Cavity, when a Vein or Artery is cut, which yet may be easily avoided by such a Knife as *Celsus* and *Paulus* call a *Spalba*. Suppose an Intercoastal Vein or Artery be hurt, what matters it? for little or no Blood can be retained because of the Perforation that is made there: and if it should be retained, the next day it will flow out again when the Wound is dress'd.

VII. When no Blood issues forth in Wounds of the Breast, that it may not flow into the Cavity, put into the Mouth under the Tongue one grain of Mosch, and the Blood will presently issue forth of the Wound, which is reputed a Secret, says *Sennertus*, lib. 2. *pract.* From whence collect, that Mosch is to be avoided in any Hemorrhage where we would stanch the Blood.

VIII. Seeing the dignity of the Heart is very great, as being a principal part, 'tis manifest that Wounds in the Breast are more dangerous than others; whence a doubt arises, whether the same be to be treated like others, and like them be to be closed up as soon as may be. Some are pleas'd with the affirmative because of the nobleness of the part, in regard whereof we must have singular care, that the fountain of heat be not hurt by being expos'd to External Injuries; and therefore they endeavour to close up such Wounds with all the Art that may be. But seeing Wounds of the Breast pour out daily such a deal of Matter, as we hardly observe to issue from the Wounds of any other part, because Nature, both for preservation of the Part, and because of the Pain, sends daily very much Blood thither, which being tainted with malignity and filth, or not altered through the weakness of the Part, is quickly corrupted; I say on this account I am of opinion that such Wounds ought to be kept long open, that there may lie open an exit for the corrupted Blood and Matter: for the Blood being retained preternaturally, or any corrupt Humour, will become the cause of greater mischief. Whence *Parvus* (lib. 2. cap. 31.) adds for a decision of this Case, that the former Opinion is true when no Preternatural Humour is contained any longer in the Breast; but the later, when the Cavity of the Breast is filled with Matter and Clots of Blood.

IX. The opening of a *Vomica* or Imposthume is not to be deferred, lest there arise a Fistulous Ulcer, or rottenness in the Bones, which I have oft seen happen to many.

I. A Woman for five years together was taken two or three times a day with a very cruel Pain in the Soal of her left Foot: it rose from a thick *Flatus*, mixt with tough Phlegm, a weakness of the part accompanying, with heat, redness, hardness: Many Remedies being used in vain, at last an actual Cautery is affixed to the Pained Part: after the falling off of the Eschar there flow'd for fifteen days a virulent Matter in great plenty, and the Patient was freed of her Pain.

II. Seeing Excrements are collected about the Extremities of our Bodies, the Hands and Feet, as the most remote from the Heart, more naturally or plentifully than in any other parts of the Limbs, so that our Hands grow dirty, and our Feet are almost crusted over with virulent and stinking *Sordes*, we must be very careful not to hinder the usual defecation there. Wherefore such as pull not off their Boots or Shoes when they go to sleep, do great injury to their Feet: And those consult ill for their health, who to hinder the stinking of their Feet, put in their Shoes Myrtle Leaves, Filings of Iron, &c. For as the Arteries endeavour to discharge themselves of their Excrements in these parts; so when the Defecation (as I may call it) is hinder'd any way, the Veins are made to absorb the same together with the Arterial Blood, which is carried back to the Heart by means of the Circulation, and wants still to be defecated.

Zacut. prax.
adm. p. 2.
obl. ult.

Simon Pauli
quadr. bot.

Penis affectus, or Diseases of the Yard.

The Contents.

- A Caution in cutting off part of the Yard when it is gangren'd. I.
- We must not after Section use an actual Cautery to stanch the Blood. II.
- The abuse of Cathetericks in rooting out of Caruncles. III.
- Cautions about taking away a Caruncle. IV.
- The Penetration by Rushes is dangerous. V.
- A Caution in putting up a Catheter. VI.
- How a Caruncle may be consumed without injuring the Urethra. VII.
- Quick-Silver and Precipitate safely cure a Caries of the Yard. VIII.
- The Cure of a Crystalline Bladder of the Glans. IX.
- The Ulcers of the Glans are to be handled gently. X.
- The Cure of a Phimosis. XI.
- When the Prepuce grows to the Glans, they are to be very warily parted the one from the other. XII.
- How a Node of the Yard is to be cured. XIII.
- The Cure of a Phimosis and Paraphimosis when caused by a wholsom Coitus. XIV.
- The Cure thereof when gotten by a Clap. XV.
- Coolers and Repellers are not to be used in the beginning. XVI.
- The Cure of a Paraphimosis in Infants. XVII.

I. IF any Portion be to be cut off from a Gangren'd Yard, we ought presently to put into the Urethra some Pipe, or a Wax Candle for Pissing; otherwise all that which remains of the substance of the Yard, retires within the Body, so that thereby the Urine cannot pass forth. The Erection of the Yard perishes by the Incision, for the Spirits can no longer be retained in the Nervous Bodies.

II. When the Yard is cut off, an actual Cautery for stanching the Blood is very dangerous, both because it obstructs the Urinary Passage, and also is apt to cause an Inflammation in the Bladder and Circum-

Walrus,
meth. med.
p. 157.

Pedum affectus, or Distempers of the Feet.

The Contents.

- A cruel Pain cured by a Cautery. I.
- The Sweat and Stinking of the Feet is to be cautiously stop'd. II.

Circumjacent parts. I order my Servants to take care of stanching the Blood, by holding continually (one after another) Stupes to the part wet in Water and Vinegar, and besprinkled with an astringent Powder.

Hildan. cent.
3. obf. 88.

III. To root out *Caruncles* in the *Vrethra* many do too boldly put up Wax Candles besmeared with Corroding Medicines; by the over great biting whereof, I have not only seen loss of substance in the *Vrethra*, but also a Gangrene, which infected not only the *Perinaum*, but also the inside of each Thigh, and consumed these parts with a foul Mortification to the destruction of the Patient. A Noble Person being troubled with a Caruncle from a virulent *Gonorrhœa*, when the Surgeon had injected with a Syringe a sharp Liquor into the Urinary passage, there presently arose a great Pain: whereupon followed an Inflammation and a Fever, his Urine was quite suppress'd, and he died in a few days.

Hildan. cent.
4. obf. 54.

IV. The original of a *Caruncle* in the *Yard* is sometimes to be attributed to a *Gonorrhœa*, in the inflammatory stiffness whereof, the Chord, as the Vulgar call it, being broken in Copulation, or to speak more artificially, the Membrane of the *Vrethra* being torn, which is contracted and made shorter by force of the Inflammation and Tumour, after a large Hemorrhage (such as is usual upon those strainings and violent tearings) there remains an Ulcer, out of which by degrees there arises a *Fungus*, namely, a Preternatural Tumour and Disease in the Urinary Passage, that cannot be safely and certainly rooted out any other way than by such Medicines as consume it by immediate contact. Those Spongy *Thymus's* use to run with a Purulent Matter, which has generally been taken for a *Gonorrhœa* by such as have less accurately consider'd the source of this Malady. Hence there appear Threads of Pus floating in the Urine, part of which Matter I think also to flow from the Prostates, which have been afflicted a long time by an *Intemperies*, not wanting Malignity, destructive of the Natural Heat, and injurious to all the Functions. I cured a Nobleman that had been afflicted fifteen years with such a Caruncle: Considering diligently all the difficulties, but especially his delicate Nature, the most exquisite sense whereof reputed even the easiest Chirurgical Remedies for the cruellest Torments, I put mine hand to the work, and having premised Universals, I consumed the whole Caruncle with little pain by an often repeated application of a Catheretick by a Wax-Candle: it was pretty hard, and three Fingers breadth long, possessing almost half the length of the *Vrethra*. The nearness of the neck of the Bladder gave me no small trouble, when I came to the end; but especially that small Tubercle, which by a gaping mouth gives passage to the Seed into the *Vrethra*, whose bulk being increased by an afflux of Humours, would have impos'd upon an unskilful Artist, and persuaded the further use of eating Medicines. But take this as a Secret from me in the Cure of a Caruncle, That 'tis better cured by delay than haste. As often as the lips of the Ulcer swell being irritated by Medicines, they fall again by the application of Lenients, and (which is strange) the most pertinacious obstacles vanish of themselves in a few days.

Theodor.
de Mayerne,
tract. de
Arthrit. p.
145.

V. Because it happens sometimes in a suppression of Urine, that there are found a great many Caruncles that hinder its passage and the application of Medicines, if neither Baths, nor Anointings, nor Candles do good, some endeavour to make a Penetration by the sharp end of a Rush, putting a Corroding Medicin upon the top of it, and so by degrees penetrating the Caruncles. Which manner of Operation is not well approved of, because there is danger the Rush may break.

Fonseca,
conf. 36.
tom. 1.

VI. Within the *Vrethra* behind the Prostates there is a Caruncle placed at the Orifice of both Ejaculatory Vessels, which like a Valve shuts both Orifices, lest the Urine being poured out into the *Vrethra* flow back again into the Seminary Vessels, or lest the Seed should flow forth involuntarily: Ignorant Surgeons hitting upon this with a Catheter, which it will not suffer to pass further, esteem it a Caruncle, which being eroded by Causticks breeds a perpetual *Gonorrhœa*.

Riolan, in
Anthropogr.

VII. There often arises a Caruncle from an Ulcer of the Urinary passage, and it is sometimes so increased as to suppress the Urine: This must be extirpated by Manual Operation and fit Medicines, which have an eroding vertue. But lest other parts also in the Urinary passage be eroded, or the Urine as it runs forth should wash off the Medicin that is applied to the Caruncle, *Aquapendent* hath invented an Instrument by the help whereof nothing but the Caruncle is eaten, and provision is made that the Medicin that is applied to the Caruncle cannot be washed off by the Urine that is often made. Let a Cannula be made of a Linnen Rag besmeared with White Wax, (a Fingers breadth long, and so broad as to equal a Silver Catheter) and let a long Thread be well fasten'd to it. Let this Cannula be first smear'd over with *Prevotius's* Eroding Medicin, (viz. Take of Honey burnt to ashes, Tutty prepared, fresh Butter washed in Plantane Water, Turpentine also washed, yellow Wax, of each half an ounce, of burnt Alum half a drachm, mix them, make a Liniment) and then be fitted to a Probe standing out of a Silver Pipe, and together with the Silver Pipe and Probe let it be put up the Urinary passage till it come at the Caruncle, and when it is just in the seat of the Caruncle, let the Silver Pipe with the Probe be drawn back again, but let the Cannula (made of a Linnen Rag Waxed over) be left in the passage, that the Urine may be expelled through it, and that it may also hinder the Medicin that is applied to the Caruncle from being washed off by the Urine.

Scul. Ar.
mam. tab.
40.

VIII. I use Precipitate safely in *Caries* about the *Glans*, sometimes alone without mixing any thing with it, having reduced it into Powder, when the *Caries* is pertinacious: Sometimes I mix it with Butter, or the Ointment of Roses: and sometimes I make it up in this form, wherein it cures all Internal *Caries*. Take of the Oyl of Sweet Almonds, of Oyl of Olive, of Unguentum Resinum, of each six drachms, of the Powder of Precipitate one drachm, a little Wax, and make an Ointment, and spread it on the finest Linnen. Ungu. Resinum is made of Oyl, the Rosin of the Pine, Turpentine and Wax. Precipitate being used thus, there is no danger it should repel the Malignant Vapour inwards, as *Petronius* thought, because of the Quick-Silver, because, as he says, it drives the Taint or Infection to the upper parts. Yea, if Precipitate should be used alone, there would be no danger hereof; for though it be made of Quick-Silver, yet from the *Agua fortis* whereby it is made, it has an attractive vertue: yea, I also approve of the use of Quick-Silver, where Precipitate, because of the Malignity of the Ulcers, is not sufficient, because it appears by Experience that either of them do very well cure these Ulcers. Nor is there any danger the Poison should be driven inwards, for we find it not to happen: nor can Quick-Silver in so small a quantity drive the Matter to the upper parts. Dalsified Precipitate, called *Turbith Minerale*, is also very good.

Fonseca,
conf. 34.
tom. 1.

IX. A Crystalline Bladder upon the *Glans* of the Yard is one of the Symptoms of the Pox, which unless it be well cured, uses to cause death. Now it by no means endures the Knife, only the Spirit of Tabaco is to be commended in this case; with which if it be but wet over five times at most, it dies and utterly wastes away. But let this be done when

Hartman.
prax. chym.
c. 233. sect.
34.

when the Patient is lying, unless you would have him fall Convulsed.

X. In curing Ulcers of the *Glans* and *Prepuce*, many mistake much while they wash the Ulcers with *Aqua fortis*, as they call it, also with the Water of Plantane, with Virioli, Alum, Verdegrise, *Ungu. Egyptiacum*, &c. and apply other acrimonious things: for by this means they add mischief to mischief, feeling the Pain which they raise by those Acrimonious Medicines, draws many Humours from the Body to the part affected; whence proceeds an Inflammation, and other Symptoms succeed daily. Wherefore such Ulcers are to be treated gently.

Fabr. Hild.
cent. 5. obs.
57.

XI. Of the Cure of a *Phimosis* (or too great straitness of the *Prepuce*) *Pareus* writes very well: There is no danger in the cutting of it, if the *Prepuce* cleave not to the *Glans*, for then the Cure is attempted in vain. But if the *Prepuce* be only too strait, and free from the *Glans*, then marking the place how far the Incision ought to be made, the *Prepuce* is extended, and the work is done by one incision lengthways of it; yet with this Caution, that the greater *Vena Pudenda* be not hurt, which being visible enough, the Surgeon cannot but see. The Incision being made, the head of the Yard struts out, being freed from all impediments. But care must be taken that the Dissected parts of the *Prepuce* grow not together again, but that they be skinned over apart.

Amman.
medic. Crit.
p. 141.

XII. The Coherence of the *Prepuce* with the *Glans* happens two ways. 1. Through an Ulcer of those two parts: For in the curing of the Ulcers thereof, they are apt to grow together, especially in Children, so that the *Prepuce* cannot afterwards be drawn back from off the *Glans*. In such Ulcers I use to put betwixt them a thin plate of Lead bended; sometimes I sprinkle thereon plentifully some drying Powder, as of burnt Lead, Litharge, &c. 2. From the first Conformation of them. Now when it is necessary to cut this band in sunder, we must see that neither the *Prepuce*, nor much less the *Glans* be touched, especially if the band be in the lowest or undermost part of the *Glans*, for in that place the Urinary Duct may be easily cut into, and thereby a hole be made through which the seed and Urine will issue. Wherefore if one cannot be avoided, rather cut somewhat off the *Prepuce* than off the *Glans*; for though the *Prepuce* should be perforated, yet the inconvenience would not be comparable to the perforation of the Urinary Passage.

Hild. cent.
3. obs. 54.

XIII. There sometimes happens an odd kind of Distemper to those who are too much addicted to Venery; some call it a *Node of the Yard*: though when that is fallen and become flaggy, there appear nothing amiss, yet he that handles the part thoroughly may perceive a certain small Tumour resembling a Bean or Glandule. I have known several that have been ignorant of the Cause, apply Emollients hereto, thinking to dissolve that hardish substance, as if it were filled with some Humour: But they have been so far from discussing of it, that the Patients have daily grown worse, their Yard bending like a Rams Horn to that side where the Tumour was, &c. Those things therefore are to be used which are prescribed for a Rupture of the Navel or other Ruptures, Astringent Fomentations, &c.

Jul. Cesar
Arantius, l.
de Tumor.
cap. 50.
Sennert.
pract. l. 4.
part. 2. f. 1.
c. 8.

XIV. If a *Phimosis* and *Paraphimosis* proceed from a vehement *Cottus*, the *Glans* remaining still tumefied, if it be fomented a good while with very cold Water, it will detumefie, and then the *Prepuce* may easily be drawn over the *Glans*. This is an admirable Secret.

Riolan. En-
chir. Anat.
l. 2. c. 31.

XV. I knew a Surgeon in Holland; that to such as were troubled with a virulent *Phimosis* and *Paraphimosis* gave presently at the beginning an infusion of *Subium Hyacinthinum*, which is not much to be found fault with in the strong and Phlegma-

tick, especially if *Crocus Metallorum* should be used in stead of *Stribum*; for it not only evacuates the offending Matter, but also revells from the part affected: but in the wasted and weak, Practitioners know it to be no safe Medicin. And we must diligently also consider whether the Whore had the Pox, for then we must abstain from the *Crocus Metallorum*, because with a certain violence it draws even from the remotest parts to the centre of the Body, as also from all Medicines that purge violently by Vomit, lest the offending Matter be drawn from the Genitals to the Liver, and an universal Disease be made of a particular one, which I have observed to happen in some. 'Tis better therefore, as I have always done with the greatest success, to purge the Body gently.

Fabr. Hild.
cent. 5. obs.
57.

XVI. Some (because they see an Inflammation present) do forthwith apply Coolers and Repellers to the part affected; but they do ill; for by that means they repel the virulent and malignant Matter contracted from impure Embraces, and rivet it as it were into the part, whence afterwards there arise virulent and malignant Ulcers. But in respect of the Pain, which is the principal symptom, I apply an Anodyne Cataplasim, of the Flower of Beans and Barley, the Seeds of Quinces and Fenugreek, Red Rose Leaves powder'd, Saffron and Milk, with the Yelks of Eggs; anointing the whole Yard, unless the vehemence of the Inflammation hinder, (for Oyl is bad for Inflammations, as *Galen* teacheth) with this Oyl: Take of Oyl of Sweet Almonds newly drawn, and of Roses, of each an ounce, of the Yelks of Eggs half an ounce: Mix them.

Idem ibid.

XVII. It happens sometimes that from the bad Diet of the Nurse an Acrimonious Humour falls upon the *Genitals of the Infant*, and there causes an itching, and upon rubbing of the part there happens a *Paraphimosis*, (that is, the *Prepuce* turns back to behind the *Glans*, and cannot be drawn over it again) the Humours flowing together betwixt the *Glans* and *Prepuce*; yea, there sometimes happens an Inflammation from the Acrimony of the Urine. Some foolish Barbers cruelly handle Infants thus diseased with deep Scarifications and applications of Acrimonious Medicines. Therefore I will here set down the Remedies whereby I have cured many. I first prescribe to the Nurse a thin and cooling Diet; then I purge her according to the nature of the predominant Humour. But if the Child be weaned, I give it at several times from one to three drachms of the compound Syrup of Roses Solutive. If the Nurse be Plethorick, after purging her I bleed her. From the beginning, if there be Pain and Inflammation, I apply this Cataplasim: Take of the Crumb of White Bread three ounces, the Powder of Roses and Balustins of each two drachms, of Saffron a scruple, of fresh Butter an ounce, of Cows Milk as much as suffices, with the Yelk of an Egg make a Cataplasim. If the Disease be stubborn I use the following; Take of Bean-Flower two ounces, the Powder of the tops of Wormwood, Chamomel Flowers, Elder Flowers, of each three drachms, of the Powder of Fenugreek Seed two drachms, of Cummin Seed three drachms, boil them in harsh Wine and make a Cataplasim. If there be Excoriation, in stead of the Wine I use a Decoction of the Flowers of Chamomel, Melilot, Elder, and Roses.

Idem ibid.
obs. 58.

Peripneumonia, or Inflammation of the Lungs.

The Contents.

- Whether a Vein be to be opened. I.
 Bleed freely. II.
 Blood is to be let till its colour change. III.
 Let the Orifice be large, and the Blood suffer'd to run out in one continued Stream. IV.
 Cupping-Glasses ought to be applied first to the Arms, and afterwards to the Breast and Back. V.
 Purging is sometimes good in the beginning. VI.
 Sometimes in the progress. VII.
 Purging and Vomits generally do harm. VIII.
 Clysters ought to be often injected, but such as are gentle. IX.
 Let Expectorators be alter'd according to the state or season of the Disease. X.
 Incrassating Eclegms are prudently to be administered. XI.
 Hot Attenuaters do hurt. XII.
 Whether drinking of cold Water be good. XIII.
 Whether sweet things be to be given. XIV.
 The Patients may be allowed to drink freely. XV.
 Whether Wine be to be granted. XVI.
 The application of Repellents does harm. XVII.
 How to remedy Vigilance or want of sleep in this Disease. XVIII.

I. **T**HERE is no small dispute concerning Phlebotomy, for 'tis written that Blood is to be let out by common Veins; whereas no Vein that uses to be opened has any communication with the Veins of the Lungs: nor are any branches distributed to the Lungs from the *Vena Cava*, as *Galen* has in several places disputed against *Erastfratus*. Besides, the motion of Nature shews this; for whereas in Diseases of the *Viscera* and burning Fevers, bleeding at the Nose is Critical, it is not so in a Peripneumony, because the Veins of the Nose that pour forth the Blood, have no communication with the Lungs. If it be true that the Blood does naturally pass from the right Ventricle of the Heart to the Lungs, and from thence is brought back into the left Ventricle, that it may be sent forth by the *Aorta*; and if the Circulation of the Blood be admitted, who sees not, that in Diseases of the Lungs the Blood flows thither in greater plenty, and oppresses the Lungs, unless it be first evacuated freely, and afterwards often a little at a time, to relieve them? This was *Hippocrates's* way, who when the Lungs are swollen draws Blood from all the parts of the Body, the Head, Nose, Tongue, Arms, and Feet, that the quantity thereof may be lessened, and it may be revelled from the Lungs. In Diseases of the Lungs he bids us Bleed as long almost as there is any Blood in the Body. The Circulation of the Blood being supposed, the Lungs are easily emptied by Venesection: if it be denied, I see not how the Blood can be revelled thence: for if it be to flow back again into the right Ventricle by the *Vena Arteriosa*, the *Sigmoides* Valves hinder; and the three-pointed Valves stop its regress into the *Cava* out of the right Ventricle. Therefore by the Circulation the Blood is exhausted thence by opening the Veins of the Arm and Foot; and the Opinion of *Fernelius* is withal destroyed, viz. That in Diseases of the Lungs Blood is rather to be drawn from the right Arm than the left, because the Blood cannot pass back into the *Cava* but by breaking through two stops and obstacles placed in the Heart.

II. And if Blood be to be let at several times and not all at once, for fear of swooning, yet it is to be let pretty freely for the first time: for unless there be a plentiful bleeding on the first days,

suppuration is to be feared. But when the Lungs abound with much Blood, we ought not to be afraid of opening a Vein three, four, five, or six times: Yet if it succeed a Quinsey or Pleurisy, we must take greater care how we Bleed.

III. Phlebotomy is requisite in almost every Peripneumony, yea, sometimes it ought to be repeated often: for the Vessels being emptied of Blood do not only withdraw the fomes of the Disease, but also resorb the Matter settled in the part affected. Now in a Peripneumony, as also in a Pleurisy, the Blood that is taken away, after it is cold, has a tough and discoloured thin skin on its surface. Further we may observe that sometimes all the Blood, and sometimes only a portion of it undergoes this change: for if the Blood be received into three or four Porringers, it will appear bad sometimes in all, but most commonly in the second and third, and pretty good in the first and last. Wherefore 'tis commonly advised to bleed always so long till that which is so depraved shall begin to run out, and, if the strength will endure it, to let the Blood continue to run till it appear good again. Indeed as frequent Experience, so likewise Reason does well enough approve of this practice: in as much as in this Disease the whole Blood does not presently acquire that lentor or sliminess; the portions that are first depraved are mostly gathered together about the place of obstruction, and stick all about in the lesser Vessels. Wherefore the Blood that first comes out will often be faultless; but then the Vessels being emptied will receive the other Morbifick Blood that stagnated before, and restore it to the Circulation: And seeing its portions that are placed near, march all in a body as it were, when they arrive at the Orifice of the Vein they will issue out together, and when they are issued forth, that which comes after presently appears purer.

IV. Wherefore in this case let the Orifice be always large, and let the Blood not only issue forth in a full, but also in a continued Stream: for otherwise if in the middle of the bleeding, whilst the naughty Blood is running out, the Orifice be stopp'd with ones Finger, (as some use to do lest the Spirits should fail) when it is opened again, the Blood that comes out next will be pure enough, the bad Blood, if there shall be any behind, having slid by and will not return presently to the Orifice.

V. If it be feared lest the strength should be cast down by Venesection; one may apply Cupping-Glasses with Scarification to the Arms and Breast, which draw the Blood from the depth of the Breast to the Skin and External parts. Yet 'tis convenient they should be first applied to the Muscles of the Arms, that the Blood may in some measure be evacuated and averted from the Lungs; and afterwards to the Shoulder-Blades, and to the Breast if it be fleshy. For though it seem to be a near place, yet it is at some distance from the Lungs, and the Attraction is made from the inner parts to the outer. ¶ For Diversion *Aretaus* substituted empty Cupping-Glasses in stead of Venesection, ordering them to be applied to the Back and other parts of the Body; and for derivation, to the Breast and Sides. *Paulus* proposes Scarified ones, which yet are not to be applied but to the deplorable. ¶ If the Body be fleshy, so that the Cupping-Glass when it is set on will not afflict the Skin that invests the Bones, there apply one: for by that means the Humours will be drawn aside to any part of the Body, and the Spirits are called out to the outer parts, whereby the Lungs are oppressed. Nor do I approve of their Opinion, who when there wants sufficient strength for Venesection at the beginning, supply it with Scarified Cupping-Glasses applied to the Breast and Back, seeing *Galen* is altogether against it, 11. *Metb. c. 17.* and 13. *cap. 19.* For at that time it will be sufficient to fasten them first

Enchir.med; pract.

Willis.

Idem;

Sennertus;

Fortis, conf. 49. cent. 1.

to the Muscles of the Arms, that the flowing Humour may after some sort be evacuated and diverted; and afterwards let them be applied to the Breast, if, as was said before, the Body be fleshy.

Mercatus.

VI. *Purging* is sometimes convenient in a Peripneumony before the seventh day, though it be then thought pernicious. Mr. N. sixty years of age was ill of a Phlegmatick Peripneumony, which was known by a Cough, difficulty of breathing, a Fever, a pain under the left Shoulder, and a flushing in his Face. And whereas he seem'd to be full of much Phlegm, and had vomited up a pretty quantity thereof, and had had three or four Stools by a Clyster which had been injected, the next day after bleeding (which he did but once) a Purge was given him of an infusion of Rhubarb with Manna and Syrup of Roses, by which he was very well purged on the fourth day of his illness, and the next day after was freed from his Fever and the other Symptoms. ¶ The impetus of the Matter is to be revoked by pretty sharp Clysters, and the plenty of Crude Humours to be lessened thereby. But we must take heed of disturbing the Belly too much; for, as *Hippocrates* tells us, a Flux of the Belly is dangerous in a Peripneumony, unless that be it only which is expelled: wherefore *Avicenna* does not commend the purging of Humours in this Disease, for the Humour being moved is exagitated more furiously, and flows more plentifully into the part affected; besides that the Medicin draws nothing of that which is contained in the inflamed part. But if it be known that the Humour is unruly and raging, or that the Body abounds with too much filth, when Blood has been let sufficiently, it will not be amiss to purge it off with some gentle Medicin, or by one that is pretty strong, but in a smaller dose.

River. cent. 1. obs. 98.

Mercatus.

VII. If Matter abound in the Lungs with rattling, and cannot be brought forth by spitting, and there be danger of suffocation on that account, as I have sometimes seen, then necessity compels us to *Evacuation by Stool*: in which case I have more than once tried Manna with good success, giving it every other day, with a good deal of Whey three hours after, in Choleric Persons; and in the Phlegmatick, with Mead made with Barley-Water, and after two hours something to eat after either of them; repeating it three or four times; For Nature when in a strait she is solicited by a loosening Medicin, provides ways for her self to send the Matter by the Guts.

Fortis, conf. 40. cent. 2.

VIII. That the emptied Vessels may withdraw the *forces* of the Disease, or resorb the very Morbifick Matter it self, even *purging* is prescribed by many. In the Practice of the Ancients, after Phlebotomy, Preparers and Purgers use constantly to be prescribed against this Disease, as against most others; but of late the Chymists with greater boldness give *Vomits*, and cry them up above all other Remedies in Peripneumonies: Yea, neglecting or forbidding Phlebotomy, they place the chief stress of the Cure in Stibiate Emetics; than which rash advice of theirs I know not whether any thing can be thought upon more pernicious. In Rustick and strong Bodies these Medicins are sometimes given without detriment, yet generally with as little benefit: but in tender Constitutions, they ought to be esteemed hardly any better than Poison. But as to purging by Stool, though it may not be convenient presently at the beginning, but always almost does hurt then; yet when the Fluxion of the Morbifick Matter is ceased, and the effervescence of the Blood allayed, we may gently empty the Body by a Solutive Medicin.

Willis.

IX. In stead of Purgers let Clysters be in frequent, yea, generally in daily use: but let these be only Lenient and Emollient, such as may gently loosen the Belly without any great agitation of the Humours or Blood, of Milk, Whey, with Brown Sugar, Syrup of Violets, &c.

Idem.

X. Having in the beginning of the Disease premised a Lentive of Manna clarified, and the Syrup of Roses solutive, the Belly is not to be solicited afterwards, as *Hippocrates* admonishes 3. de Morb. n. 17. but the Evacuation of the Matter is to be endeavoured to be made by spitting: And as at the beginning *Diapenidium*, *Diacodium*, *Diagacanth. frig.* red Poppy Flowers, the Waters of Burnet and Ground-Ivy, &c. are good, in as much as they stay the flowing Blood and greatly cool it: so in the progress thereof Take of the *Fulap* of Sorrel two ounces, of the Syrup of Marshmallows one ounce, mix them, for a Lambitive; proceeding by degrees to Remedies that are more attenuating and expectorating. Thus *Aetius* gives *Mulsa* (or Mead) with Hyssop or dried Flower-de-Luce boiled in it; and if there be danger of Suffocation, he adds Nitre also to the Decoction of Hyssop, &c.

XI. *Incrassating Lambitives* must be very cautiously administered; for nothing happens worse to the Peripneumonick, than to be hindered from Spitting; and they are in greater danger from want of Expectoration than the Pleuritick are. Therefore if the Fluxion be very thin, I disallow not of a Lambitive that consists of the Syrups of *Lykorrhize*, *Violets*, and *Jujubs*, if you moreover mix therewith some of the Syrup of Vinegar or of Oxymel, that the thin Matter which is a flowing into the Lungs may be thickned; but that that which being already flown thereinto is become thick, may be attenuated.

Fortis, conf. 40. cent. 2.

XII. Concerning the use of *Attenuaters* I also give this Advice, which I observe all have omitted, that such Attenuating Medicins as have a notable heat are not to be used; whereas all Writers of Physick allow even of those Medicins which are good in an *Orthopnea*, as Flower-de-Luce, Hyssop, Horehound, &c. But I do not approve of them, first, because they increase the Inflammation; secondly, because they dispose the Lungs which are already debilitated by the Inflammation, to an Ulcer. Therefore for inciding I would not pass higher than *Mulsa*, Oxymel, or in hot Temperaments the Syrup of Vinegar, &c.

Saxoni. præl. pract. c. 28. l. 1.

XIII. For an Alterative, and to temper the febrile and inflammatory heat, the drinking of cold Water is proposed by *Hippocrates*, 1. Acut. 43. which yet we must use cautiously, and not but in an Erysipelaceous Inflammation, or only in the very beginning, lest otherwise the inflamed part and the Matter it self be more and more condensed. The Whey of Asses Milk is to be given in this case.

Idem ibid.

XIV. *Hippocrates* (2. de morb.) bids us give sweet suppers on the first days, that that which sticks in the Lungs may be washed out: And otherwise also sweet things are friendly to the Lungs. Others disallow thereof, because things that are hot and apt to turn to choler increase the Fever, and lead towards an inflammation of the Liver and Spleen: And seeing *Hippocrates*, where he treats of the cure of a Pleurisy, gives acid potions to make the Patient spit the more easily, the same seem to be agreeable also to a Peripneumony, seeing these Diseases are almost cured alike. But we must know that sweet things are not all of one sort, for some are hotter, others rather temperate; yea, some are watry: of which the two last sorts cannot lightly hurt. And such as are hotter, are not given by themselves alone, but are diluted with those things which hinder them from being easily turn'd into choler. And though sweet things seem to offend the Liver more than the Lungs, (seeing they come to the Liver entire and but little changed, whereas but a small portion of them comes to the Lungs) it is altogether safer to chuse sweet things that are not over hot, and to give them mixt with other things. And if the Humours that are con-

Fortis, conf. 40. cent. 2.

tained

tained in the Lung, be pretty thick, their inciding and attenuating vertue may be increased by mixing Acids with them: whence Oxymel mixt with Medicines convenient for the Diseases of the Breast, is a most fitting Medicine to promote the Expectoration of rough Humours.

Sennert. cap. de Peripneum.

XV. *Actius* prescribes little drink, because moisture is hurtful to the Lungs: But *Hippocrates* determines the contrary, who, *lib. 1. de morb.* says, that the Patients ought to drink off their Cups, that the Lungs may be wet thereby. Reason assents hereto; for in a Peripneumony, and especially when choler and a too hot Blood abound, the Lungs wax dry, which Distemper seems to indicate moistening, which is obtained by much Drink.

Salus notis in Altimar. c. 51. Merc. cap. prop.

XVI. *Hippocrates*, *l. 2. de Morb. f. 3.* makes mention of a Disease of the Lungs, not much differing from a Peripneumony, which he calls a *Lethargy*: The difference of which Diseases consists only in the Matter. For in a Peripneumony the Humour predominantly offending is Choler, or Cholerick Blood; but in this Disease it is Phlegm: whence as in a Peripneumony a *Delirium* happens through heat; so in a *Lethargy* does there follow a drowsiness through moisture, (see the Title of the *Lethargy*) and from the putrefaction there accompanies it a slight doating. But it is not difficult to reconcile the difference of this place, and *lib. 3.* in allowing of Wine, if we consider that 'tis seldom but *Hippocrates* allows Wine in Diseases of the Breast, if not in respect of Drink, yet however for Medicin, that Expectoration may be promoted, or that the vertue of Medicines may sooner be brought to the Heart: On which account indeed he bids us often drink Wine after suppers; which is done in this Disease; wherein, in as much as drinking of Wine is suspected because of the *Delirium*, he therefore forbids the drinking of it, *lib. 3.* yet he forbids not the drinking a little quantity of it after suppers, as it is a Medicine. With us the drinking of Wine in a Peripneumony (yea, in almost any hot Diseases of the Breast) is very hurtful, as daily Experience assures us, so that even the very scent of it offends the Patients; yea, it cannot be allowed even in the invasion of a fainting-fit, but it hastens the death of the Patient. Whether the Reason be the Condition of the Climate or of the Wine, or somewhat else, I leave to inquiry: Surely the Heart that is seated near to the Lungs, soon partakes of the heat that accreus from the drinking of Wine.

P. Martian. comm. in v. 242. loc. cit.

XVII. As to *Topicks*, either none or only weak *Repellents* and *Astringents* are to be applied in the beginning of the Inflammation, both because of the nearness of the Heart, lest the Humour be repelled into a principal part; and also because of necessary Respiration, lest the use of the Lungs be hindered by constringing the Breast. Wherefore the Oyls of Roses, Myrtles, and Violets will suffice, with the Waters of Roses and Violets, and the Juice of Plantane.

Chalmet, Enchir. p. 145.

XVIII. The greatest difficulty is, what we shall give against *Vigilia* or want of sleep, when it is very troublesome; in as much as Opiats, because they hurt Respiration, which is already prejudic'd in this Disease, are not safely taken, yea, sometimes they become pernicious: wherefore *Laudanum*, and the stronger Preparations of *Opium* ought to be utterly avoided in a Peripneumony. Yet in the mean time the milder Anodynes and Hypnoticks, as especially the Water and Syrup of red Poppy, are not only allowed, but esteemed Specifick Remedies in this Disease and the Pleurisy: yea, we may sometimes use *Diacodiales* if the Patients strength hold out, and the Pulse be strong and laudable enough.

Willis.

The Phrensy.

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I. IN all *Venessection* that is made in a *Delirium*, we must observe this, not to make a large Orifice: for so it will close again; for which end it is to be accurately bound up, that it may not be loosened by the Patient. Also for the quicker closing up thereof, 'twill be profitable to apply a Plaster made of Aloes, the White of an Egg, and Hares Wooll.

River.

II. Among deriving Medicines the opening of the Forehead-Vein has place, out of which Blood is to be taken to five or six ounces, which has good success, when Blood enough has first been taken out of the Veins of the Arm. Let Leeches also be applied behind the Ears, which Remedy is profitable indeed, but less effectual than the former, because by the Leeches the most thin portion of the Blood is only drawn forth, whereas by the Forehead-Vein there is sometimes drawn out in a Phrensy a more impure and corrupt Blood than out of the Vein of the Arm. See an Example in *Hecurnius*, *apbor. 72. 4.*

Idem, l. 174 c. 1.

III. Though plentiful Bleeding be requisite, especially if Blood abound, the Inflammation but beginning, and the Phrensy proceed from no other Disease; yet must we not, as some *Arabians* advise, bleed till the Patient faint away, lest the Spirits fail which are weak of themselves from want of sleep and continual restlessness, and which cannot expect to be recruited by a little fuller Diet: so that 'tis safer to bleed a little at once several times.

Sennertus.

IV. We may administer a Clyster after Bleeding: for if one be called in the morning on the first day of the Disease, he may presently open a Vein without delay, though a Clyster be not first given, seeing there is danger lest the Matter be carried plentifully to the Head. For, as *Hippocrates* says, (*lib. de rat. viſſ.*) we may open a Vein without premising a Clyster, in case of urgent necessity. But if any truce be granted, let a Clyster be first given.

Rondelet. pract. l. 1. c. 15.

V. Let

V. Let great care be taken to procure sleep the next night after Blood-letting: for after the Blood is evacuated, if the Patients do not sleep, they grow more raging. Therefore give *Diacodium* with the Juice or Water of *Ptisan*; for often after sleep they come to themselves again.

Hetruius.
Riverius.

VI. See that *Stupefiers* be not used continually, lest the Phrensy turn to a Lethargy. Let Externals also be warily applied to those whose Spirits are low, lest the Matter be coagulated in the Head, and through weakness of the Faculties cannot afterwards be resolved and dissipated.

Hartman.
pract. Chy-
miatr. c. 8.
sect. 9.

VII. Some think we ought to abstain from Medicines that purge *electively*, because the Matter is Crude, and the Vicious Humour not as yet separated from the good; which if it be agitated, will rush the sooner and with the greater violence to the Head. Others on the contrary hope for more benefit from the evacuation of the Humours, than hurt by the agitation of them: For though they cannot deny but that the Humour is as yet generally Crude, yet they suppose it to have the condition of a Turgent Matter, and that as it wanders about, it tends towards the Head; and therefore is to be purged off, lest it rush into the Head, especially seeing all of it cannot be evacuated by Bleeding. But there is need of a distinction here, and we must consider whether the Inflammation arise from the Fever, or the Fever proceed from the Inflammation as the primary Disease. For if the primary Disease be a Fever, and the Inflammation be raised from the motion of the Cacoehymie agitated in the Veins, such Matter is deservedly referred to a Turgent; therefore according to *Hippocrates's* his Advice, 1. aph. 22. it is to be evacuated presently in the beginning: And though Nature drive it to a certain part, yet it is not so immovable, but that it may easily follow the leading of a Purge; and that it is Turgent, appears even from hence, that such Matter seems at first to be moved to one part, and by and by 'tis carried to another: whence of a Pleurisy is sometimes made a Quinsy, or a Peripneumony; or of either of these a Pleurisy. But if the Matter be received already into the Brain, and the beginning of the Disease be over, 'tis to no purpose to give Purgers. Also, as *Massarius* affirms, 'tis dangerous to deter purging to the declination, seeing the Disease kills either in the beginning, or in the augment, or in the state. But the case is quite altered when the Inflammation proceeds (without a Fever preceding) from the hurt of the Brain or its Membranes, or from an effervescence of the Blood in the Veins of the Head: For in such case *Hippocrates's* Advice is to be followed, (2. de fract. 1. 20. & 22.) who in such Inflammation purges indeed in the beginning, before the Fever come; but after it is come, purges no longer: For then the Matter is not Turgent, such as rushes to any part in the beginnings of Fevers; nor is the beginning of the Disease from the Veins of the whole Body, but it proceeds from a peculiar part.

VIII. *Hypnoticks* are oft necessary in this Disease, but the stronger sort are not convenient presently at the beginning, nor are they to be used often, because the sleep that is procured by Opiats does carry more Morbifick Matter into the Brain, and fixes it more closely therein.

Dan. Sennert.
pract. cap. 27. l. 1.
part. 1.

Willis.

IX. Because want of sleep is very urgent in this Disease, sleep is to be procured some way or other even in the beginning of the Disease. The proposed Repellents are good for that purpose, especially if before the application of Oxyrrhodines the Head be wet with the cold Oyl of Violets, whereby Convulsions are also prevented. Inwardly with Juleps or Emulsions may sometimes be given an ounce of the Syrup of Poppy, or two or three grains of *Laudanum* Opiate; which likewise being given in Clysters does powerfully enough

and more safely procure sleep. Yet in the use of Narcoticks the Physician ought to be wary: for they ought not to be given if the Spirits be very low, lest these and the heat be extinguished by them.

Lazar. River.

X. *Narcoticks* which consist of merely cold things, must be cautiously given, because they agree not so well with some, the Fibres of whose Stomach are very tender and sensible. I have oft observed such Hypnoticks to cause a great oppression in the Stomach, then presently an inflation of it; and a while after, distractions and disturbances of the Spirits in the Brain, yea, in the whole Body have followed, so that there ensued not only a frustration of sleep, but also the greatest inquietude.

Willis.

XI. When watchings are very troublesome, we may make a Decoction of Chamomel Flowers with some heads of Poppy in it, and foment the Head therewith warm: For such things as are applied cold, condense the Humour and Vapour; and those things which do very much stupify, as Mandrake, Hemlock, and Opium, lead to a contrary Disease, and cause an incurable passion: for I have seen some whom their Physicians had brought into a deep sleep by immoderate cooling, to dye Lethargick. Of the efficacy of an actual Caustery, see the Title of Mania, or Madness.

Christ. a.
Vega. l. 3.
c. 6. Art.
Med.

XII. Some prescribe the decoction of Coriander for Drink, which yet is suspected by me, seeing Coriander Seeds are of themselves apt to disturb the Mind, and to cause a Delirium. Nor matters the Authority of *Avicen*, who thinks that Coriander is cold; for we must rather believe *Galen*, *Dioscorides*, Experience, Reason, and Truth.

Salus. c. 6.
Annot. in
Altim.

XIII. A Phrensy sometimes turns to a Lethargy, because the Humours are too much cooled by the use of cold Medicines, and where there is a thickness of Matter. Thence also happen sometimes those obscure, gentle, and trembling Phrenasies which *Galen* calls Hectick.

Rubeus. c.
13. l. 3.
comment.
in Celsum.

XIV. In the use of Oxyrrhodines the Constitution of the Patient, with the season of the year, or the External Air, are to be considered: For in strong and robust Constitutions, where there is a vehement heat about the Head, and so an exquisite Phrensy, and especially in Summer, they are to be applied not only virtually but actually cold. But when the Body is more weak, or the Patient is either a Child or old Man, and there is no such heat about the Head, and it is Winter, they are rather to be applied warm, especially in those places where the virtue of the Medicines can the better penetrate, namely about the Sutures. And this also is to be noted, that some Topicks penetrate easily of themselves, as being made of Vinegar, Vervain, Dill, and the like; which being often applied cold, do nevertheless perfect their operation: Others are astringent, as Roses, Plantane, Bole-Armene, which act better when they are warmed. ¶ Let not the use of these be continued too long; but only about three days; and let the quantity of the Vinegar be also less, because of the urgent *Vigilia*.

Sennertus.

Greg. Horst.
probl. 4. de
cad. 2.

XV. If (as it sometime happens) the Inflammation seem to tend towards the Skin and the outer parts of the Head, lest the Matter being repelled inwards and towards the Brain should induce a greater mischief, we must abstain from Repellents, especially such as are more strong.

Idem.

XVI. There is some dispute whether the Head should be shaven or not: For some think that upon shaving the Head, more Humour flows thither: but seeing Alteratives and Repressers of the Humours, such as Oxyrrhodine (for *Galen*, 11. meth. attributes a repressing virtue to Vinegar) and other cold things which are commended, may be the better applied to the Head when shaven, and the Matter may also exhale the better, I think 'tis best

Crato in
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to shave it. ¶ Let Topicks be applied to the shaven Head, (and be renewed as oft as they grow hot) both that the vertue of the Medicin may penetrate the better, and also that the Head being eased of the burthen of the Hair, the Fumes may be the more easily discolled: for the crop of Hair being cut down, cannot sprout forth in so short a time (which *Archigenes* is afraid of) that more Matter should be drawn to the Head on that account. But when the Hair is short or very thin of it self, these things may be well enough applied to the unshaven Head.

Sennertus.

XVII. At length in the state, or beginning of the declination of a Phrensy, *Resolventis* are to be applied, especially Animals or their Parts, young Pigeons, Whelps, a Sheeps Lungs, which are the most convenient because they softly embrace all the Head. But some do ill to apply them at the beginning, because by increasing the heat they do the more promote the Fluxion to the Brain and increase the *Delirium*.

River 1. 17.
c. 1. sect. 3.

XVIII. Among those things which hinder the motion of the Matter to the Head, you shall expect the greatest benefit from washings of the Legs; unless you fear the striking in of Spots in Malignant Fevers: in which case you shall make use of this Remedy in a warm Room, and in the Summer season, or when the Spots are a vanishing; though such washings do sometimes the more draw forth the Spots themselves. This is a very excellent Remedy, both because it draws the heat to the lower and outer parts, and also because by the heat and looseness of the parts it discolles that which it has drawn.

Mercatus.

XIX. In the mean time the greatest regard is to be had to the strength; for when that fails, all hopes of Cure are lost. Now it uses to be soon weakened by great watchings, perpetual agitations of the Mind and Body, thin Diet, and Phlebotomy which sometimes 'tis necessary to repeat often. Wherefore we must take diligent heed, lest whilst by purging, or often bleeding we endeavour to root out the Disease, we do not suddenly weaken the Vital Faculty: If this begin to fail, neglecting the Phrensy, and granting a fuller Diet, we must chiefly insist upon Cordials. ¶ It is always expedient to add to other Medicins some of the *Solution of Perls*, and in the declination some drops of *Aurum potable*, for when Nature is strengthened the often uses to drive forth the reliques of the Disease by sweat.

Willis.

Hartman.

XX. A lusty Wench being in a Fever and stark staring mad, was continually held bound in her Bed: she was bled plentifully and often, took a great many Clysters, had Juleps, Emulsions, and Hypnoticks prescribed her: All which doing no good, she remained without sleep and very much distracted for seven or eight days, continually calling out for cold Drink: Wherefore she had as much Water given her to drink as she would, but her thirst was never the more quenched. I advised (seeing it was Summer time) that the Women should take her out into a Boat at midnight, and putting off her Cloaths and loosing her Bands should duck her in a deep River, tying a Rope about her middle to pull her up again by, to keep her from drowning: But there was no need of such an hank upon her, for she swam of her own accord almost as well as any Person could do, that had learned to swim. After little more than a quarter of an hour she is taken well and sober out of the Water, and then being laid in Bed she slept, and sweat plentifully, and afterwards recover'd without any other Remedy. The reason why this Cure succeeded so soon and so happily, was, because the excesses of both the Vital and Animal Flame (that were both of them vastly increased) were taken away by the proper Remedy of a too intense heat, to wit by the moisture and coldness of the Water.

Willis, cap.
de Phrenit.

¶ A like Instance we had at Geneva in the Summer of the year 1680. A strong Man being taken with a burning Fever and *Delirium*, (whose House was near the River *Rhodanus*) escapes those that were to look to him, and throws himself headlong into the River. One was to go out of the City a good distance (because of the Walls) before one could take him out of the Current; but before they could get thither, he was got to the Bank on the other side, (being a good swimmer) where he was found safe and return'd to his right mind; and being brought home, he recover'd wholly presently after. But this Remedy did not succeed so well with a Wench, that being somewhat frantick, by some bodies advice was thrown into a Bathing Tub full of cold Water in the midst of a very cold Winter, for thereupon she died a few hours after.

XXI. Physicians do not agree concerning the drinking of Wine: Some think 'tis wholly to be abstain'd from, as from Poison, seeing it helps forward the motion of the Humours to the Head, and increases the *Delirium* joined therewith: Others allow of it if the Watchings be pertinacious, and the Spirits low, because it recruits the Spirits, temperates Watchings and allwageth Madnes. But the former opinion is more agreeable to truth: for when Wine is said to moderate Watchings and demulce the Mind, 'tis to be understood of Melancholick *Deliriums* and Watchings rather than of that which arises from an hot Humour and Inflammation, which are rather exasperated by the use of Wine: Wherefore in the beginning it is to be wholly abstain'd from; but afterwards, where the Disease admits it and the Spirits require it, small Wine at least may be allowed to such as have been used to Wine, especially to those who have been otherwise accustomed to drink Wine without Water.

Sennertus.

XXII. Physicians dispute whether the Patient be kept in the light or in the dark: We produce *Celsus's* Opinion concerning it, who (l. 3. c. 19.) writes thus: *The Ancients kept such Patients in the dark, because they thought that contributed to their rest: Asclepiades said that they ought to be kept in the light, because darkness was frightful to them: But neither of these is constant. 'Tis best therefore to try both, and to keep him in the light that is afraid of darkness, and to keep him in the dark, that is disturbed at the light. But where there is no such difference, when the Patient is strong, let him be kept in a light place, and when weak, in a dark. For there is some diversity of Natures in this case, the dark disturbing some more, and the light others: And some when they are in a somewhat lightsom place, imagine they see many things which they do not see, take one thing for another, and conceive various Images from Objects; wherefore such a Patient is to be kept in the dark: On the contrary, if he be afraid in the dark, let him be kept in the light.*

Idem.

XXIII. When the Frantick are raging mad, order them to be bound, and look you come not near them, because they have sometimes killed their Physicians: And at Venice I knew a Mad Man that kill'd two Priests. Add hereto, That by such Ligaments there is made a diversion of Matter from the Head; and the Frantick hardly ever rave when they have their Bands upon them, &c.

Saxon. pract.
c. 3.

XXIV. In a Phrensy there sometimes happens a suppression of Urine on the sixth day, a continual Fever being present; which suppression if the Physician endeavour to remedy, he mistakes: for this suppression does oft indicate a Crisis by sweat. Therefore it is not to be cured, but to be committed to Nature acting well, lest she being disturbed by unseasonable Discreticks the Patient be brought to his end, an Instance whereof is given by *H. ab Her, obs. 3.* But if the Diureticks be

Hippocr. 6.
Epidem. 1.

or

of such a nature as to be withal Diaphoretick, opening, inciding, and moving of Tartar, such as the Antepileptick Powder of Hartman, the admirable effects whereof I have many times experienced in an Epilepsy and other Diseases of the Head, and in Madness it self, especially if the said Diseases arise from the Juice of the Nerves being too dull, acid, and vapid as it were; in this case Medicins full of a volatil Alkali salt are the most available, such as the Spirit of Hartshorn, of Mans Blood rectified, of Soot. But if the Nervous Liquor be too acrimonious and salt, or the Effluvia steaming from the effluating Blood drive the Animal Spirits into distractions, such Remedies which consist of a Volatil acid are given with success, as the Volatil Spirit of Vitriol, the opening Striated Spirit of Penetus, the Philosophical Spirit of Vitriol.

Frid. Hofm.
m. m. l. r.
c. 12.

Phthisis, or Consumption.

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Medicins.

I. **T**Hough the Matter that causes the Cough defile not from the Head upon the Lungs by the Wind-Pipe; yet drilling sometimes out of the sides of the Wind-Pipe, and falling down into the Cavities of the Lungs, it produces that Disease which is commonly known by the name of a Catarrh. For the Wind-Pipe besides a Nervous and Musculous Coat, has also a Vasculous and Glandulous one; into this last are deposited superfluous Humidities from the Blood, which bedew the whole Wind-Pipe. Now if at any time the mass of Blood be too much fused and precipitated into Serosities, (as upon catching cold, drinking acid things, &c.) hereupon presently a great deal of watry Matter sweats out of the Glands of the Wind-Pipe and the mouths of the Arteries into its Cavities, which soon causes Coughing and Spitting. Whilst these things are moderate, and only the superfluities of the Blood are expelled, they often turn rather to profit than benefit, because thus the mass of Blood and the Lungs themselves are cleansed. But if these Affections being prolonged, the Serous Humour being every where deposited in the Ducts of the Wind-Pipe, shall at length begin to be alter'd towards Putrefaction, then the motion and crasis of the Blood are perverted, and the Humour is plentifully deposited out of the mass of Blood, which first of all enters the little Bladders annexed to the small Branches of the Wind-Pipe, and at length fills and somewhat distends them; and by and by the sides of one, two, or more of them being burst, there is made an Ulcer. The Curative Intentions are chiefly these three; 1. To hinder the dissolution of the Blood, which is the root of all the mischief: 2. Presently and sufficiently to evacuate the corrupt Matter gathered in the Lungs by Expectoration: 3. To strengthen and dry the Lungs, that have their unity dissolved, or are too lax and moist, that they may not be still more and more corrupted, and receive more and more the Morbifick Matter. As to the first indication let these three things be procured: 1. That the Mass of Blood may contain and assimilate all the Nutritious Juice that is afforded to it, and may be so proportioned therewith as that it offend neither in quantity nor quality. Wherefore above all things let it be order'd, that People that Cough and are Phthisical, abstain very much from Drinks, and take Liquids or Spoon-meat but in small quantity, so that the Blood, being weak in its Crasis, may the more easily subdue the Minute Portions of the fresh Juice, and retain them within its Compages, whilst it is not satiated with too many of them. Moreover, let that fresh Juice consist of such Particles, as being mild and thin may be tamed by the Blood, and assimilated without Effervescence. Wherefore Asses or Goats Milk, the Cream of Barley, Water-gruel, &c. will be more agreeable and nourish better than Flesh, Eggs, Gellies, &c. 2. The second thing to be produced is, that the Acidities, that are either bred in the Blood, or poured into it from some other where, may be so destroyed, that the Blood retaining still its mixture or crasis, may not be so prone to fluxions or fusions: Wherefore it is necessary that both its own Acidities, and those of other Humours mixed with it, be destroyed: which Intention will be the best performed by Medicins prepared of Sulphur, which should be taken freely if there be no Fever. Vulnerary Decoctions are also good for the same purpose, and Decoctions of Pectoral Herbs,

Herbs, as also of the Woods taken for ordinary Drink: Likewise the Powder of Crabs Eyes, Hog-Lice, and of other things endued with an Alkali or Volatil salt. 3. And lastly, That all the Recrements produced in the Blood be derived from the Lungs to other Emunctories and places of Evacuation; which intention, respecting the first indication, suggests that very many ways of Evacuations are to be made use of, Phlebotomy, Purging by Urine, slight Purgation by Stool, Baths, Frictions of the Extreame Parts, *Drapaces* or Shaving off the Hair, Issues, Apophlegmatisms, &c. The second indication in a beginning *Phthisis*, viz. that the Tabick Matter deposited in the Lungs may be easily and thoroughly expelled daily, is performed by Expecterating Medicines, whose virtue is carried two ways to the Lungs, either as their active Particles are immediately let down by the Wind-Pipe, and procure Expectoration partly by lubricating the ways, and withal loosening the Matter that is fixt therein, and partly by irritating the Excretory Fibres into Spasms; whither belong Lamentatives and Suffumigations: or, as they exert their virtue in coming along with the Blood, (which are the more powerful) for seeing they consist of such Particles as cannot be tamed and assimilated by the Mass of Blood, these being poured into the Blood, and because they cannot be mixed therewith, being thrown out of it again presently, penetrate out of the Arteries of the Lungs into the Ducts of the Wind-Pipe, where lighting upon the Matter they divide, attenuate, and so exagitate it, that the Fibres being thereby irritated, and successively contracted in Coughing, the contents of the Wind-Pipe and its little Bladders are cast up into the Mouth. Things fit for this purpose, besides Sulphur and its Preparations, are artificial Balsamicks distilled with the Oyl of Turpentine, the Tinctures and Syrups of Gum. *Ammoniacum*, *Galbanum*, *Asa fetida*, Garlick, Onions, and such like that smell strong, of which Lohochs are also made: And these operate both ways; for partly by sliding into the Wind-Pipe, and partly by entering into the Lungs by the Circulation of the Blood, they set upon the Morbifick Matter both before and behind, and so drive it forth with the greater violence. As to the third Indication, that the injur'd Conformation of the Lungs, or their vitiated Constitution may be restored or amended, let those things be used which resist Putrefaction, cleanse, consolidate, dry, and strengthen; for which purpose the Remedies prepared of Sulphur, Balsamicks and Traumaticks are useful.

Willis.

II. *Galen* (1. *Epid. comm.* 17.) speaking of a *Phthisis*, says, that it proceeds not always from a Fluxion from the Head, but that Excrements flow into the Lungs sometimes from other Parts. Wherefore their ignorance is not to be endured, who think that the Recrements which are in the Lungs proceed only from the Head. For it may so happen that a *Phthisis* may be caused by an Humour transmitted from other parts of the Body, the Brain being sound. In which case whether *Silicidia* (or droppings) upon the Coronal Suture, or Sinapisms, Errhines and Masticatories do any good, let others judge.

Sanctor. l. de remed. invent. c. 14.

III. Those Remedies which respect the whole Body are very necessary; at this day they are not rightly administered, wherefore few are cured. I was lately at *Venice* and prescribed to a Patient an ounce of the Honey of Roses and another of *Oxymel*, that the Phlegm that was in his Stomach, and was the cause of much mischief, might be cleansed away. The Apothecary by mistake sent ten ounces, and the Patient took eight and an half of the Medicine: The same acting violently upon the Phlegm, was somewhat disturbing to him, but afterwards the Phlegm descended so into the Guts, and was so expelled, that all the symptoms were mitigated; wherefore Physicians must be bold sometimes.

Capivacc. Pr. l. 2. c. 7.

IV. Whether it is fit, and strictly necessary, upon any occasion to give a Purge to Consumptive People, or to let them Blood? We have seldom need of Bleeding in a *Tubercle* or Consumption, especially when there is an Ulcer already made, unless a new Fluxion supervene, or unless there be a fresh opening of some Vein, or where the defluxion is very fervent, and the Liver hot, or the Lungs burst on some occasion.

V. *Avicenna* in a *Phthisis* gives *Pil. Cochia* for the sake of the whole Body: Our common Practitioners give them not, but they do ill; for we ought to succour the Fluxion presently: for we may hope well when the Ulcer is not deep, but it becomes so when the Disease is prolonged; which comes to pass through the Matter flowing into the Lungs, wherefore that Matter is to be evacuated. Therefore after one loosening of the Belly, after two or three Syrups, *Pil. Cochia* are to be given presently according to *Avicenna*, that the whole may be purged and the Head evacuated, and so the Fluxion may be remedied. What I say of *Pil. Cochia*, the same is to be understood of other strong Looseners, for the fault of the offending Humour is vehement, and is of the nature of a *Causa sine qua non*; therefore a strong Purge shall be given; especially because the strength permiteth, which forbiddeth it in the progress of the Malady. For at the beginning, though it be an Heftick Fever, it is in the habitude, not in the habit; and whilst it is in the habitude, the strength in an Heftick Fever hath suffered no mischief as yet.

Idem.

VI. In those who have a Fluxion of acrimonious, biting, and corroding Humours, especially if there be also an ebullition and effervescence of the Humours, not altogether neglecting the indication of the Consumption, (for an exquisit or confirm'd *Tubercle* admits not of Evacuators even in those in whom the Fluxion still remains, but only of Diverters) 'tis certain that it will be very safe and necessary to purge, especially with those Medicines which may profit both the Breast and the Ulcer, and avert and lessen or bridle the Fluxion. Of this nature is *Rhubarb* believed to be, (sometimes the roasted) mixt with *Spikenard*, and diluted with the infusion of *Roses* and *Goats Milk*. Alike profitable is it to take in the morning a spoonful of *Corinth* with the Powder of *Rhubarb* and *Sugar*, so that for a pound of *Corinth* there be half an ounce of *Rhubarb*, and four ounces of *Sugar*. *Sugar* of *Roses* with a little *Rhubarb* is likewise good, or the same *Sugar* with *Bolus Armene* and the Juice of *Agarick*; or a Bolus of the Powder of *Roses* with the Juice of *Carthamus Seed*, or of *Agarick* or *Rhubarb* extracted with Milk Water. But if the Matter that flows be acrimonious, by licking often a little of the Pulp of *Cassia fistula*, or of the same made into a Conserve, you may gently loosen the Belly and avert the Fluxion thither, you may lenify the Breast and Wind-Pipe, and help Expectoration, especially if you dissolve it in Barley-Water, to which you may add the Powder of either *Lykyrrhize* or *Roses*, or if you will of *Rhubarb*: because the only way to cure a *Phthisis* is to recall the Matter to some other place; for when it is restrained by any of the foregoing things, it is more inconvenient and dangerous.

Mercatus.

VII. Nothing is plainer in the Doctrine of *Hippocrates*, than that those who labour under a *Tubercle* are not to be purged by Stool. For in *lib. 2. de morb. sect. 2. v. 320*, treating of the Cure of a *Tubercle* from a Disease of the Lungs, he does not only expressly forbid purging by Stool, saying, Give no Medicine that purges downwards; but prescribing white Hellebore, he orders it to be given so temper'd as not to move the Belly downwards. Seeing therefore *Hippocrates* for the Cure of a *Tubercle* uses only Vomits for Evacuation, and is so fearful of purging by Stool, it is not reasonable that

Aphor.

Aphor. 8. sect. 4. should determine the clean contrary: And therefore we must affirm that by the word *quidam* he does not understand Persons labouring under a *Tabes*, but such as by their Natural Constitution are disposed thereto; for in these, Vomits are suspected, for fear lest some Vessel should be broken in the Breast, which in this sort of Constitution is strait and weak. But Purgation by Stool is hurtful to the *Tabid*, because it uses to bring on a Looseness that is deadly to them. Wherefore Purgings by Vomit will be less inconvenient for these, by the vehemence whereof though the Lungs be agitated and strained; yet because they are accustomed to such Commotions by reason of their Cough, which does violently exagitate almost all *Tabid* Persons, therefore Vomiting is not very apt to do mischief, and it may be of great relief to the Patient, not only in that it brings forth the antecedent Matter, but also because it does not a little help the Excretion of the Conjunct Cause, which is made by Coughing. Nor need the breaking of a Vessel be feared in these through the violence of the Vomit, because the Veins being exceedingly emptied in these Persons from their Extenuation, are not so apt to break, as in those who are not as yet fallen into a *Tabes*.

VIII. *Galen, 5. simpl. cap. 12.* greatly condemns *Diureticks*, because, he says, they hinder the Expectoration of Matter, for the Matter is thickened by them, which can only be expelled by Coughing: The reason is, because the Matter that is in the Breast is by *Diureticks* deprived of the ichorous part, which serves to make the Matter thin.

IX. Before you enter upon the Cure of the Ulcer alone, 'tis necessary also to have regard to the Humours that have flowed into the Breast or Lungs. Wherefore we must consider whether the Fluxion, from whence the Malady begins, remain still, or be already suppressed, or ended: For if it continue still, whether from the Body, or from the Head, or from any other place, we spend the time to no purpose in the Cure, unless we first restrain the Fluxion, or find it to be derived to some other place. Wherefore it will be necessary either to avert it by Medicines, or to end it with gentle Evacuations, or to restrain it in the part that sends it: For we restrain it by reducing the Head to its Native Temperament, or by ending and dissipating the Humour there; as *Galen, 5. meth.* hath reported of the Plaster of *Ibapsia*, which we must use neither rashly, nor in all cases, but only when the Head is cold and Phlegmatick: for then it both excites the sluggish heat, and corrects the cold Intemperature, and therefore stops the Phlegmatick Fluxion, because it dissolves or concocts. But if the Fluxion be hot, or acrimonious, or biting, we must perform the Cure by warm Baths, or by cold and astringent Pouders, &c. But the Matter that is already generated, and which is daily bred by the intemperature of the Head, can be averted by no Remedy more safely than by making an Issue in one or both Arms; whereby, by faithful Experience I know, that not a few Phthisical Persons have been cured.

X. I am of opinion that your Waters called *Acidulae*, are not good for those whose Lungs are Ulcer'd, (though they may seem agreeable at first sight by their cooling virtue, whereby they are opposite to a Fever; by their drying, whereby they cure Catarrhs; by their abstersory, whereby they cleanse the Ulcer) 1. because of their acrimony which is hurtful to the Corroded Lungs; 2. by reason of the acidity joined, which is astringent, whence they hinder Expectoration; 3. by Evacuating they hurt the *Tabid* that are already exhausted; 4. by drying and cooling they consume the Native heat; 5. by their coldness they hurt the Stomach that is already weak, with which the Heart sympathizes. A Bath is not good, because, 1. by its

actual heat it increases the Hectick Fever that is joined with the *Tabes*; 2. the Members are further dried; 3. they exhaust the Body still more by a *Diaphoresis* and provoking of Sweat; 4. nor are they profitable on the account of the Ulcer, because their virtue reaches not to the Lungs; 5. nor do they extinguish the Fever, seeing they heat and dry; 6. nor do they cure the wasting, for they evacuate, dry, and heat; 7. nor do they cure the *desfluxion*, which is often raised thereby. ¶ Yet *Foris, conf. 34. cent. 2.* has recourse thereto as the only Remedy.

XI. Let Physicians note that in case of an Ulcer the Lungs are to be cleansed from the Blood that is extravasated, as *Galen* advises *5. meth.* Nor must we in these cases always proceed with astringent and closing Medicines; otherwise the Blood being retained will be the cause of greater mischief, and hence suppuration and death will inevitably succeed. Let them note the same thing, if upon the descent of Blood from the Head to the Lungs there succeed either a dry Cough, or such as is not sufficient to purge the Lungs from the Blood; because if the Lungs be not perfectly cleansed, the same mischiefs will follow.

XII. The Decoction of *Guaiacum* Wood has a notable virtue to cure the Ulcers of Phthisical Persons, and is commended by several very learned Physicians. The Decoction of the Root of *China* is also profitable. For though these Decoctions seem to dry the Body, yet the profit that accrues from healing up the Ulcer in the Lungs, is far greater. For seeing the leanness of the Body has its rise from an Ulcer of the Lungs, such Decoctions, by taking away the cause of the extenuation of the Body, by confining the vitious Humours and curing the Ulcer, make the Extenuated Bodies to be well nourish'd again and grow fat, as Experience has often taught. ¶ I know that there want not very great difficulties in the administering of them; for to give an hot and dry Medicine to a *Tabid* and Feverish Body is contrary to all Medical indication. Nevertheless, because if the Ulcer be not dried, neither the Fever nor the *Tabes* can end, hence it comes to pass that the more Learned Physicians have admitted of the use of Driers. I declare that about seventeen years ago I cured a Phthisical Person that had gotten the Pox, by a Decoction of *Guaiacum*, who is yet alive still. If any be afraid of it, let him take the Root of *China*, which I used with good success in a Phthisical Woman after a suppurated *Peripneumony*, who is still alive. See an Example in *Riverius, cent. 1. obs. 99.* I have learned by Experience that a Decoction of *Lignum sanctum* is good in this case, says *Silvat. cent. 2. conf. 36.*

XIII. Among those things which are very much commended, is the Sugar or Conserve of *Roses*, which yet some deny to the Phthisical, because the Ulcer of the Lungs needs cleansing and bringing forth of the Matter; which two things are the chief causes why most Ulcers of the Lungs are incurable: Now this Sugar is too weak to cleanse and absterge the Ulcer sufficiently: Besides that when it is new, it loosens the Belly, the Flux whereof is dangerous; and when old, by drying and astringing it compresses the ways and makes them straiter; whence the eduction of the Matter is hindered, and the *Sanies* driven inward: yea, seeing it is cold, it seems inconvenient, according to *Aphor. 5. 24.* But in truth it is to be allowed to the Phthisical; for that is profitable for them, (says the *Reconciler diff. 194.*) which cleanses, absterses, glutinates, corrects the *intemperies* that is introduced, and is withal in some sort nutritive; all which this Sugar or Conserve does; whence we conclude that it ought to be much esteemed, as not only the Testimony of Classical Authors, but daily Experience also witnesses. Yet that is to be noted which *Mesue*

Sebil de Acid. p. 443.

P. salus, comm. in 16. l. 1. de morib.

Sennertus.

Saxon, pract. p. 146.

Prosper Martian, comm. in aph. 8. sect. 4.

Sanctor, de rem. invent. cap. 5.

Mercatus.

admonishes, and after him the *Reconciler*, That Sugar of Roses is not to be granted before stronger absterging and mundifying Medicines have preceded, and the Ulcer be purged from its Pus; at which time there is need of a slight absterging, but a greatly glutinating virtue; which thing is very well performed by the Sugar of Roses that is betwixt new and old, used daily in such form as it can best be taken in. Hence it appears what is to be answer'd to the first and second Reasons that forbid it. And when *Hippocrates* says that cold things are hurtful to the Breast, he speaks of an excessive coldness, such as is in Ice and Snow. ¶ Some Conditions are to be observed in the use of Conserve of Roses: 1. That Abstergers and Mundifiers be premised; and therefore at the beginning let that which is new be given, which has more Juice in it, and therefore a greater absterging virtue: 2. That it be given in a large quantity, and that daily; yea, let it be taken with Bread, and Meat and Drink: 3. That if by its use Expectoration be hindered, and Respiration become difficult, Expectorators be given betwixt whiles. ¶ *Red Roses* use to be much commended for consolidating the cleansed Ulcer, as also the Conserve that is made of them, though hitherto I have seen no good and great effect thereof; because when it is taken in a great quantity, as the Commenders thereof would have it, the Stomach and Guts are filled with much Phlegm, whence the appetite is not only dejected, but chylification also hurt: Moreover there often arises a troublesome coldness in the upper region of the *Abdomen*, and so of the Stomach, from which the Patients cannot be freed again in some Months space, which I have observed to come to pass more than once. Therefore I would prefer a Decoction of red Roses made with a strong Expression, and that sweetned with a little Sugar.

XIV. Most have commended the breathing in an hot and dry air for drying up the Ulcers of the Lungs: For this reason the Ancients also advised Phthisical Persons to sail into *Egypt*: *Galen* bade them go to *Tabia*. Nor must we think that such Air only of Naturemaking is to be procured, but we read in *Galen* (4. loc. aff. 8.) that an Air for this purpose may be also prepared by Art and Odours. Whom *Veslingius* imitating undertook to cure a certain grown Person, ill of a long Phthisis, by Suffumigations chiefly, such indeed as were moist at the beginning, of the Herbs of Agrimony, Betony, Foal-foot, Lungwort, Speedwel, and the Roots of Burnet and Cinquefoil boil'd in Potrage; and afterwards by such as were dry, as Benzoin, Ladanum, Stirax and Mastich, received in at the gaping mouth: testifying at large, that he hath known Phthisical Persons that were very desperate, recovered chiefly by a Suffumigation of Ambergrise. *Silvaticus*, cent. 1. conf. 51. hath commended the same. *Bennetius*, (*Theatr. tabidor. exerc. 30.*) has drawn Instruments fit for Effumigation and Vaporation. *Lud. de Leonibus* cured a Phthisical Person, who was so lean one might tell all his Bones, by a Suffumigation of Amber. See more before concerning the Diseases of the Breast and Lungs in general.

XV. When leanness hinders the use of Medicines that would dry up the Ulcer, I give *Asses Milk*, but with the Oyl of *Guaiacum*: This way six years ago I cured a Phthisical German Nobleman. Or you may give a Broth made thus: Take of *Guaiacum* or *China*; if *Guaiacum*, three ounces; if *China*, one: Infuse them in three quarts of Water: Then take of Barley unhusked half an handful; *Amylum*, Gum Tragacanth, of each two drachms; of the Seeds of Sorrel and Plantane, of each one drachm; of the Seeds of Melon blanch'd half an ounce; of the Kernels of Pine-Apples and Pistach-Nuts, of each an ounce and an half; the

Flesh of Wood Snails two ounces: Put as much of them as can be put in the Belly of a little Puller; Let them boil all together till the perfect consumption of the Flesh, and straining the Liquor let it be given for thirty days. This I give with great success to Phthisical Persons; The Dose is six ounces.

XVI. Tabid People cough importunately, and evacuate much purulent Phlegm: Therefore some are afraid of Milk, because they have persuaded themselves that it breeds and turns to Phlegm. But Milk being entire and new, and milked from those Animals that are of a good habit, is of good Juice, and is made of Blood well concocted; so little reason is there why it should be reckoned amongst those things that are of bad and Phlegmatick Juice; and that because the Butter is mixt with it: whence *Avicen* prescribes Butter-milk, because the Butter is apt to be inflamed, yea, it will take fire; so far was he from thinking that it would be turn'd into Phlegm, that it rather turns to Choler. (Therefore *Trallianus* commends new Cheese, because it cools.) Nor is it then turned into that thick and purulent Phlegm which Consumptive People sometime cough up: For Milk consists of Butter, Whey, and Cheese: The Whey is of a Nitrous quality, it cleanseth, opens obstructions, carries Acrimonious and Aduft Humours through the Belly, which are the effect of heat: therefore *Galen* esteems sower Milk cold, because it has lost the acrimonious quality of the Serum: however supposing that it cooled very much, yet it could never be turned into thick Phlegm by reason of the thinness of its substance: The Butter it self, seeing it is inflammable, never turns to Phlegm: The Cheesy part, having the Whey and Butter mixt with it, is not viscous: so that by the mixture of these three together Milk becomes very temperate: it moistens, nourishes, attemperates, nor does it breed that Phlegm which some Phthisical Persons are so troubled with. Yet suppose it were Phlegmatick, seeing that Phlegm is lodged only in the Stomach, and stuffs not the Lungs which are affected, there will more benefit accrue by its use, than inconvenience from the generation of Phlegm, because of the great faculty it has to nourish and temper.

XVII. Milk has the chief place amongst the Remedies of Tabid People: yet in the giving of it divers Cautions are to be observed, lest it rather do hurt than good; for it is apt to corrupt upon the Stomach, either being turned into a nidour, or waxing sower and curdling in the Stomach. When it waxes sower, a little Honey or Sugar may be boiled in it; for thus is the coldness of the Stomach amended, which makes the Milk turn sower. If it be turned into a nidour, it is corrupted by heat; and then it is profitable to mix Water enough with it. But the vulgar approve not of this mixture of Water; yet the best Physicians have advis'd it, for it tempers the heat, does no harm to the Milk, especially if it be Cows Milk, that now adays is by far the most usual. *Hippocrates*, 7. *Epid.* gives Cows Milk with a sixth part of Water, both because this sort of Milk is naturally more thick, and also because it is apt to turn to a Nidour. And 5. *Epid.* 36. he relates a Story of *Pythocles*, who gave his Patients Milk mixt with a great deal of Water. Thus likewise *Galen* commends Asses Milk, because it is the thinnest, and has the least Coagulum or Cheesy part: In defect whereof 'twill be convenient to bring Cows Milk to its temperature and consistence, which is best done by mixing Water with it.

XVIII. I have sometimes observed in an Asthma and an inveterate Cough, when very absterging and inciding things have been used, that the Patients have fallen into a looseness with great relief. But if there be not a moderation in the use of these things, the Phthisical and Dropical are apt to be offended by

Hort. dec.
4. probl. 9.

Sennert.

Sylv. tract.
4. append.
sect. 187, &
188.

G. H. Vel-
schius, obs.
28.

Saxon. præf.
præf. p. 1.
c. 25.

Primifol.
de err. vulg.
l. 3. c. ult.

Idem, c. 174

by them and the like; whence a mortal *Diarrhæa* afterwards supervening, they go to the common place, to the great reproach of Practitioners. Whence *Hofman* says, such things as do so powerfully open obstructions, do withal purge in a just dose.

XIX. Modern Physicians have thought that *Ros solis* or Sun-dew, especially the distilled Water of it, is singularly good for all Phthisical and Tabid Persons. For as the Herb seems most tenacious of moisture and dew, so that even the most fervent heat of the Sun cannot consume the moisture: so it has been believed that the natural and genital moisture is preserved and cherished by it in the Bodies of Men. But the use of it teaches otherwise, and Reason also dictates another thing. For seeing it is a very Acrimonious Herb, and its distilled Water is not wholly destitute of this very acrimony, it cannot be taken without offence and prejudice: for those who have made use of its distilled Water have died sooner, than they would have done if they had abstained from it and followed a right manner of living and diet.

XX. I have used *temperate Acids* with very good success, contrary to the opinion of perhaps all Writers. The reason is clear, because the *Lympha* (which is collected in both the Orbicular and Sinuous Bladders of the Lungs) is too thick: Sweet things not temper'd with Acids, I with many others have observed to have been always, at least for the most part, injurious to the Patients.

XXI. Note that Sulphureous Remedies are not always convenient in this case; wherefore *Sennerius* (*in Insitut.*) admonishes rightly: *Lac Sulphuris* is not to be given alone especially, nor in a great quantity: yet it may be mixed with Moisteners (especially a Decoction of China with Raisins and Lykorrhize.) And, which is to be observed, from the too much using of the *Balsam of Sulphur* Practitioners testify that many have fallen into a Phthisis. ¶ Whether is it safe to use the *Balsam of Sulphur*, and other oily Balsamicks prepared of Sulphur with distilled Oils, in a Phthisis or Exulceration of the Lungs (or other *Viscera*) that has arisen from salt Humours causing a spitting of Blood? *Schroder* with others affirms they may, nor perhaps want there Reasons for it: because first, such Balsamicks increase the Radical moisture or Balsam with the innate heat: secondly, they refresh the Vital Spirits: thirdly, they temper the acid salts in the *Lympha* and Mass of Blood, from whence putrefactions proceed, as appears by Mechanical Chymistry, whilst by such distilled Oils the acid corrosive vertue even of *Aqua fortis* may be corrected: fourthly, they are internal Vulneraries, resisting Putrefaction; in regard that even externally being dropt into the broth of Flesh, they hinder the same from putrefying or stinking. But if we will not even in this case make slight of that common Curative Rule, That Contraries are to be cured by Contraries, we shall certainly have no good success if we undertake to cure a Phthisis or Ulceration of the Lungs with such Balsam of Sulphur, or other Oleous Balsamicks, made of the Flowers of Sulphur with distilled Oils. For it is well known that in a Phthisis or Ulcer of the Lungs, or other Internal *Viscera*, there is always either a previous, or a present Inflammation, and that not without an inflaming and painful Acid: 'Tis also well known to all, that the distilled Oils and other things of which the said Balsamicks are made, are also hot, inflammable, and resinous; though few perceive that this is to be imputed to their acid Particles. Distilled Oils and other fat things do harm in Distempers of the Skull and Bones, (being anointed therewith) and in Erysipelatous Distempers they bring on a Gangrene by reason of their occult Acid: With what sound reason therefore can these things be given in a Phthisis

or Ulceration of the Lungs? Besides, seeing then the digestive ferments of the *Viscera* are likewise very weak, and these Oleous Balsamicks, because of their unctuous Acid that is immersed in the Volatil salts, do rather fight against those ferments, as appears from the belching after taking of them, they cannot be brought into act and converted into Volatil salts agreeable to Nature, whence remaining thus crude they are wholly offensive to Nature, and cause an irreparable mischief. Furthermore in such Diseases the whole Mass of Blood, together with the *Lympha*, is otherwise grown vapid as it were, so that the Volatil salt, Oleous and Balsamick Particles which are congruous to Nature being spent or resolved herein, the Spirit of Life being become weaker, loses of its light, yea, becomes very little: and when such Sulphureous Preternatural very hot Oils are made use of, what else will happen, but that as a greater flame extinguishes a less, so also these things which are hot in an high degree, do utterly extinguish the remainder of the vital flame, or in stead of the vital heat introduce an Hætick? As to the second reason why they may be used, viz. because they refresh the Vital Spirits; I say it matters little, though by their sulphur they seem to cheer them a little, unless they did also thereby consume the Morbifick Cause, and unlock the stop and obstructed ways, and strengthen the ferments of the *Viscera*. As to the third, 'tis confessed indeed that distilled Oils do allay the corrosive vertue of *Aqua fortis*, whilst a weaker Acid corrects a stronger; but what signifies this to their Internal use? And lastly, the reason why these Balsamick Oils being dropt into Flesh-broth, preserve it from stinking and corruption, is because they defend it from the injury of the Air, even as we see that the Oil of Sweet Almonds made by expression, or the Oil of Olives, keeps Wine in the Vessel from corrupting; But what is this to the present business? It proves nothing; for the operation of these Balsams in Mans Body differs far from that which they have in other things without the Body: In the former there is a fermental heat; in the later a putredinal, elementary.

XXII. Amongst *Abstergers* and *Mundifiers* of an Ulcer, I have hitherto found no Medicine, which being used either outwardly or inwardly, has so safely and quickly not only cleansed, but also closed up fresh Ulcers, as the Balsam of Sulphur, when the Patients could and would make use of it: Now I prefer that before the rest which is made with the Oil of Aniseeds, though it may be also made with the Oils of Amber, Juniper, Venice Turpentine, Nuts, and other things. ¶ The toughness of the Matter which hinders Respiration, is loosned by inciding Medicines, and so is easilier cough'd up. For this purpose I do in like manner commend the Balsam of Sulphur prepared with the Oil of Aniseeds, as being not only good for cleansing and closing up of the Ulcer, but also makes the Pus it self more thin and fluid, and so promotes and facilitates its excretion.

XXIII. In this case some commend not only the Flowers of Sulphur and the Balsam, but also the Milk, whereof yet I never observed any notable effect, though I have oft given it to my Patients, and have also seen it given by others.

XXIV. *Injections* made into the cavity of the Breast help very much, when the outer surface or substance of the Lungs is Ulcerated; if the Ulcer be caused by a Wound in the Breast that extends to the Lungs, seeing in that case there is an open way whereby this may be done. And by the use hereof (such things being in the mean time given also inwardly as are proper in other Exulcerations) I have seen a Man recovered and live many years after, who was stabl'd in his Breast as far as his Lungs, from whence there arose an Ulcer therein, and corrupted pieces of his Lungs came sometimes forth

S. Pauli
Quadrup.
Bryan. p.
390.

Remb. Do-
don. l. 5.
Pemptad. 3.
hist. stirp.
p. 475.

P. Barbette,
Pr. lib. 2.
c. 2.

Deckers in
not. ad prax.
Barbet. p.
m. 93.

Frid. Hofm.
clav. Schrod.
p. 375.

Sylv. tract.
4. append.
sect. 180, &
181.

idem, sect.
199.

idem, sect.
190.

forth of the Wound, and the Man was become quite Tabid: I know another also who evacuated a Bloody, sanious, and purulent Matter through a Wound in his Breast, that by the use hereof was relieved a good while ago and is still alive.

Plater. tom.
3. p. 436.

XXV. The Catarrh is first to be stop't: Therefore I perswade the whole Head to be shaven, and Vesicatories to be applied thereto, first of the more gentle, but at length I come to the stronger, even to *Cantharides*. I applied Vesicatories to the Head of a certain Noble Lady that labour'd under a Phthisis, improperly so called, (namely that arose from a Catarrh descending from the Head and putrefying in the Lungs, whereby the Body rises to waste, and the same symptoms follow as do upon an Exulceration of the Lungs) and Nature supplied that which we could not do, all her Head being covered with Blisters and Croits, and she was cured of this Catarrh, and is still alive. Afterwards I would come to the draining also of the Breast and Lungs, and would blister all the Breast; and at length would make Issues upon both Arms, and so the Matter would exhale every where, and the putrefaction by that means cease, and there will be a diversion of the Matter. Whence *Galen* in a true Phthisis orders Cauterics or Issues upon the Breast, to drain it.

Montan.
conf. 147.

XXVI. The diversion of a Catarrh is most conveniently performed by *Fontanels* or Issues, which I cannot sufficiently commend, seeing I my self have seen such cured by them as have been half Phthisical, who cough'd up both Blood and Matter: for the Acrimonious Humour that flows from the Head upon the Breast, is first evacuated by them. I knew a Man who had been Consumptive a long time, of a Melancholick Constitution of Body, and who had used divers other Remedies in vain, whom I not only cured in a fortnight of the defluxion from his Head upon the inferior parts by making an Issue in his left Arm, but his Body also somewhat recovered its vigour and lost Flesh. ¶ A Girl had a *Fistula* in the middle of her Hip, and for three years together had been in several hands to no purpose, but being cured at length, she fell into a plentiful spitting of Blood after three or four Months. Though she was hardly ten years old, I presently let her Blood in the Foot of that side which the *Fistula* had been on; and then Purging her, and making an Issue near the place where the *Fistula* had been, I readily deliver'd her from a very imminent *Tabes*. This spitting of Blood came from no other Cause than from that Acrimonious and Bilious Matter, which having no exit any longer by the *Fistula*, afterwards ascended to the Lungs by the Branches of the *Vena Cava*.

Fabrit. Hild.
Epist. 49.

Spigel. de
corp. hum.
fabrit. l. 5.
c. 3.

XXVII. We may use *Fontanels* in a Fluxion from the Head: for whilst the Ulcer is fed by the destillation, a *Fontanel* is indicated, as a Revelling Remedy; nor is there any prohibent Indication, especially when the Ulcer is small, and the Malady new. *Trallianus* saith, That in an old Ulcer, and a long-continued Phthisis, the Patients are not to be afflicted, or rather tormented with *Fontanels* or Cauterics. If the Malady be very vehement, it is to be made in the Coronal Suture, that Revulsion may be made: and if the destillation be fed by the interior parts, as by the Liver, let Issues be made in the Thighs. They are not to be deferred, as many use to do; for after a while no such thing is to be done, in a plentiful Defluxion, not only to the said parts, but not below the *Occiput*. We must use them therefore betimes; for afterwards when there is an hot Distemper in the Lungs, and the Fluxion is diminished, the Issue may be dried up. ¶ When the Matter is precipitated from the Brain upon the Lungs, which causes an increase of the Ulcer, what is then to be done? I say, if the Ulcer should be such as that there might be any hopes to induce a *Callus* upon

Capivac.

it, a Caution applied to the Coronal Suture would notably contribute to health; for it causes no pain there, nor is it at all dangerous. We make use of a Caution here, to make the *Callus* the firmer, which otherwise could not be firm at all because of the destillations; and by the incursion of the Catarrh it would be apt to be fretted off, whence the Ulcer would become also greater. But when there is no hope of making a *Callus*, we ought not to use a Caution without a Prognostick; declaring that there is no hope of curing the Party, but that with the Blessing of God his Life may be a while prolonged by the Caution, for the Ulcer will become the cleaner. But take heed of applying Caution when Death is not far off, and the Body is wasted, for fear of a Gangrene.

Heurnius.

XXVIII. The Son of Mr. N. twenty years old, had labour'd under a Fluxion for two Months, talking upon his Lungs with a Cough, frequent Respiration and a slow Fever, so that he seem'd to be ready to fall into a Consumption. I prescribed Bleeding, Purging with Manna, Medical Broths, and other ordinary Remedies; but the chief was an Issue made in each *Arm-bole*, which most powerfully derives Fluxions falling upon the Breast, and Humours contained therein; and hereby he was recovered in a months time.

River. cent.
2. obs. 61.

XXIX. A Noble Matron had labour'd for some years under a destillation upon her Breast, and that so violent, that she was nothing benefited by Medicines: At length the Malady being so far increased, that she cough'd up not only Purulent Matter plentifully, but also Blood, and was running into an Hectick, I being advis'd withal, besides convenient Diet and Medicines, made moreover a *Seton* in the Nape of her Neck; by the benefit whereof she was restored in a short time to admiration, so that she had Children afterwards.

Hild. cent. 3.
obs. 38.

XXX. The Ancients greatly approved of the use of *Baths*. *Hippocrates*, 2. de Morb. says, That a Tabid Person must bathe in luke-warm Water all but his Head, which ought very rarely to be washed. But we must consider that it is not expedient for all Tabid Persons, seeing there is a manifold cause of a *Tabes*; for it will do hurt, when the Blood flows, has flown, or 'tis feared is about to flow: also when a Fluxion falls from the Head, and likewise when the Lungs are very full of Excrements: it will do good only in a *Tabes* or Extenuation of the whole, without any defluxion; or in that which is caused by an Ulcer in the Lungs, by correcting the driness of the whole, and applying a moisture like to that of Nature, and by tempering the Preternatural heat. Yet you are not bound to use this sort of Remedy either long, or frequently, or in all cases alike, but according to the Constitution and state of the Body: because those who are of a rare habit, are more slowly and seldom to be washed, nor are they to be kept long in the Bath: neither those for the same reason who are become very Tabid, for their puny strength will be dissolved thereby. But you shall bathe those oftener and longer who are Tabid from an Ulcer in their Lungs; and that by so much the more often and longer while, by how much the Disease is but yet a beginning. ¶ In a Fever that proceeds from an Ulcer of the Lungs, seeing it is not Hectick but Putrid, (though 'tis not to be denied that sometimes an Hectick is joined with it in process of time) Baths are in no wise to be made use of; for they do not only do no good, but also much hurt, as it has been observed in many. But that they are good in an Hectick, unless it have a Putrid Fever joined with it, none that is skill'd in Physick is ignorant of.

Mercat. cap.
de phthisi.

XXXI. All Antimonial Medicines, both Diaphoretick, Purgative, and Vomitive, free the Blood from Pus better perhaps than all other Medicines; which Antimonials I have more than once observed

Crato, conf.
86. apud
Scholtz.

observed to have brought out by Stool and Urine a good quantity of Pus in a Phthisis and great inveterate Ulcer of the Lungs, so that for many days afterwards there was no Pus expelled by coughing. That there was an Ulcer appeared by the dissection of the dead Body.

XXXII. *Galen*, the Master of Physicians, sent Phthisical Persons to *Tabia*, not that he might quit himself of their Cure, but for the drying up of the Ulcer and Fluxion, by breathing in a pure Air endued with a drying faculty, and season'd with the Balsamick vertue of the Plants growing there. Some years ago I sent thither a Nobleman of our Country (by name *Cotton*) who was sick of a confirm'd Phthisis, and spit Pus with Blood, being like a Skeleton clad in Parchment for leanness; who at his return, being thoroughly recover'd, Married, living in good health in his Family, and became the Father of several Children. I have seen a Nobleman (that the efficacy of the Air in Diseases of the Lungs may appear) who was twice cured of a *Fistula* that succeeded a deep Wound in the opposite side of his Breast. He went into *Spain*, where after five years the *Fistula* closed up: but returning hither home again, into a cold and moist Climate, the *Fistula* broke out again of its own accord; whereupon going into *Spain* again, he was cured by the like stay. Whence it is clear that the Air, which passes through all the Pipes of the Lungs, does exert its vertue more effectually than any other Remedy, by its natural or ascitic qualities.

XXXIII. Yet from such change of place all do not receive help alike; for many going into *France* or into Country Villages, do find there rather their Graves than Health: yea, *London* is not presently to be left by all Phthisical Persons; for I have known several subject to a Cough and Phthisis, that have been better in this smoaky Air than in the Country. So that for the curing of the same Disease, whilst some avoid this City as Hell, others betake themselves to it as a City of Refuge. The reasons hereof appear clear enough from the Doctrine of Respiration: Namely, we have shewn that the Blood passing through the Lungs, both as to its accension or vitality, and as to its motion depends very much upon the Nitrous Air that is received in Inspiration; whence it follows that the Tenour of this ought to be proportioned to the Crasis of that, that the Blood being moderately accended in the *Præcordia*, may burn clearly and briskly, both without smoak and foot, and also without too vehement a Flame; and thereupon may pass through the Pneumonic Vessels freely enough, without stop or depositing its Excrements. Wherefore an Air that is moist, foggy, and not ventilated with Winds, as it is wholesome for none, so is it most hurtful to such as are troubled with Coughs: On the contrary, a serene and mild Air, enjoying the Sun and Wind moderately, as it is wholesome for all, so is it friendly to all Phthisical Persons. As to other Conditions of Inspiration, some avoid or lose a Cough by living in mountainous and open places, where the impending Atmosphere, being destitute of all thick, smoaky, and feculent Vapours, abounds with Nitrous Particles: For such whose Blood being thick and feculent is full of an impure Sulphur, and has need of a very thin and nitrous Air to kindle it rightly, and to consume its feculencies by the accension; if their Lungs be not too tender, but firm and strong enough, they endure the stronger appulses of such like Particles: On the contrary, such as have Blood that is thin and subtil, easily dissoluble, and endued with a more pure, but very little sulphur, and have also Lungs that are tender, soft, and being of a more rare texture are very sensible; these not enduring a nitrous and rough Air, receive most benefit by that which is thick, and

chiefly by the Sulphureous: Wherefore 'tis best for these to breath in the fat and more dull Air of a smoaky City, namely, such as may afford a sulphur (which is wanting in some sort) as well as nitre to the hungry and too thin Blood, and may a little incrassate and fix its subtil and over dissoluble consistence; and may moreover dull the substance of the Lungs, or their over sensible and rare texture, and fence them against the encountering of the too sharp and impropotioned Air. Indeed it is clear by frequent Experience, that a thick Air, if it be withal sulphureous, is very benign to some (that I say not to all) Phthisical Persons. 'Tis commonly observ'd that those Countreys where their firing is Turf, which in burning sends forth a very sulphureous smell, are more rarely infested with Consumptions: yea, those places are very wholesome for those who are subject to a Phthisis, and sometimes recover them who have sals thereinto. Whereto add, that a suffumigation of Sulphur and Arsenick (which is very full of Sulphur) though it be the last, yet is a very effectual Remedy for the cure of almost deplorable Ulcers of the Lungs. Now the reason why a Sulphureous Air is so agreeable to some Phthisical Persons, is, first, Because by inspiring such an Air, as well the jejune and hungry Blood as the tender and easily offended Lungs are both helped and spared; secondly, Because the Sulphureous Particles that are inspired together with the Nitrous, do very greatly prevent or take away the acidities of whatsoever Humours (from which Acidities the Fluxions and Extravasations of the Humours do chiefly arise.) And truly for this reason 'tis that Sulphureous Medicines do give that notable relief to Coughing or Phthisical Persons: and therefore, as was said before, Sulphur is called the Balsam of the Lungs: for as Balsamicks being applied to an Ulcer or Wound, take away the acidity of the Ichor that issues out, and corrupts, or grievously irritates the Fibres; do likewise ease the Pain, and afterwards cure the solution of Continuity: so also the Sulphureous Particles conveyed into the Lungs either with the Air or with the Blood, in as much as they prevent or destroy the acidities of all the Humours, viz. the Crisior or Blood, *Lympha*, *Serum*, Nervous and Nutritious Juice, do very much contribute to the prevention or cure of a Phthisis.

XXXIV. Modern Physicians do recommend Snails to the Phthisical and Hæctick, induced no doubt by the Authority of *Galen*, who 3. de alim. facult. c. 3. affirms that the Flesh of Snails doth nourish very much. But seeing the same Person, and the matter it self teach, that they are of difficult concoction, and do not afford a good Juice, it is apparent hence that they are not good. For seeing the Phthisical labour under a lingering putrid Fever, and moreover the natural faculty in the Stomach and Liver, yea, in the whole Body is weak, it will not be able to conquer Meat of difficult concoction, whereby many Excrements will redound, both in the whole Body, and also in the Lungs themselves; or therefore because they are of evil Juice. Moreover the same thing will happen here as in Wounds, which pour forth a more plentiful *Sanies* if the Patient feed upon bad Victuals; and many superfluities will be heaped up from the Ulcer in the Lungs, and much Pus, from which there is the greatest danger. And if we should grant that the extreame part of the Snails, which *Aristotle* calls *pharynx*, is more easily concocted, it is to be understood only in comparison to the rest.

XXXV. I have seen many become suppurated and Tabid without any preceding Destillation, or any Inflammatory Affection, or any Defluxion foregoing. Hence from Reason and Experience I say, that besides the ordinary Causes, there are

Y y y two

Sylv. prax.
med. l. 1. c.
24. lect. 20.

Th. de
Mayerne,
tract. de
Arthrit. p.
64.

Willis,

two hidden ones of Suppurated and Tabid Lungs; one is the languor and weakness of the part, the other the badness of the nourishment: which two Causes concurring, the Lungs are easily suppurated and wax tabid; without a distillation, or an Ulcer, or any other particular Affection preceding. This weakness is contracted from the Parents, and conceives Corruption and Putrefaction, not through any Intemperature, but through the vitiated Substance which is made too flaggy by Nature; yet such do not grow Tabid before they come towards Maturity, because till that Age they are nourished with a mild and sweet Blood, because the innate heat, that is much in quantity and sweet in quality, abounds, whence an equal nutrition is performed. But when they are arrived at their Juventus or ripe Age, their innate heat beginning to become somewhat Acrimonious and less kindly, they breed a like Blood, which, the further their Age proceeds, becomes also the more Acrimonious and unsweet, as does also their innate heat: and at length their Blood acquires a saltish or acrimonious quality, whereof an undue aliment being made, the Lungs are disposed to corruption. Whence in these Persons a naughty Excrement accreting from this bad Nutrition, there begins a little short Cough with spitting of various Matter, which is a sign of the Corruption beginning in the Bowel. Now I have attempted and performed the Cure hereof by such things as might correct the Blood and make it mild, and might abate of its acrimony and saltiness; as Baths of sweet Water, drinking of Milk, Meats of like nature, temperate and moistening Anointings, the decoction of the Root of *China*, and other things of this quality: with which I have used also such things as might resist the Putrefaction, Corruption, and Flaggingness of the Bowel, and might chiefly respect the Lungs. But I have principally made use of this as a most singular and powerful Medicin, by the help whereof I have performed wonderful and almost incredible things, not only in the cure of a *Tabes*, whether imminent or beginning, but also in salt Distillations, especially the thin, in long continued Fluxions of the Blood caused by its ardour or heat, and in many other rebellious Diseases: The Medicin is a decoction of *Saunders*, made almost in the same manner as the decoction of *Guaiacum*, sometimes in simple distilled Waters, sometimes with the addition of a little Wine either white or red, with respect to the Disease, and sometimes other ways: the manner of taking it is the same with that of *Guaiacum*. I advised the Patients to leave their Country Soil, and change their Native Air for a purer, at least to alter it.

P. Sallus, comm. in text. 5. sect. 3. l. i. de morb. See Fernel. de part. morb. l. 5. c. 10.

P. Borellus, cent. 2. obs. 59.

XXXVI. Many Students become Tabid by over much Study as is supposed, but rather from the Candle smoke which they draw in with the Air in their close Studies, as has been very profitably observed by *Placaus* a Professor at *Saumur*.

XXXVII. A Woman after spitting of Blood fell into a *Phthisis* with an *Heetick*; she cough'd up purulent Matter tinged with Blood; was troubled with Colliquating Sweats and difficulty of breathing; yet was cured by this only Medicin. Take of the Roots of *Comfrey*, *Foalfoot*, and *Elecampane*, of each six ounces, boil them in as much Water as suffices, till they are soft: then pound them, and pass them through a Sieve: Take of *Raisins* and *Corinths*, of each half a pound, boil them in the Liquor wherein the Roots were boiled, and extract their Pulp in the same manner: Take of *Sage*, *Betony*, *Hyssop*, *Speedwell*, *Ground-Ivy*, and *Lungwort*, of each an hand-ful, boil them in the Liquor that remains from the Raisins and Corinths: Take of this Decoction strained, and of *Sugar-Candy*, of each one pound, boil them to a consistence, and then strain them; and add of the Pulp of the Roots, Raisins, and Corinths, of *Sweet Almonds*, blanch'd,

and fresh *Pine-Apples* well pounded, of each three ounces, of *Cinamon* two drachms, of *Saffron* a scruple: mix them and make an Electuary. By the same Medicin, very little changed, I cured my Son of three years old, who after he had escaped from the *Petechia*, had Imposthumes gather and break in his Lungs four times, so that he expectorated Pus in great plenty, and was wasted to Skin and Bone. Otherwise a *Phthisis* is a dangerous Disease, not only because the Medicins cannot come in their entire strength to the part affected, but also because of the substance it felt of the Lungs, which according to *Malpighius* is not fleshy, but consists of Membranous Bladders: Now a Membrane is a *Spermatick* part, which being consumed is not regenerated. I know a Maid of about twenty years of Age, that is strong and juicy, who in her seventh year was *Phthisical* and *Heetick*, and given over by her Physicians, to whom her Sagacious Mother gave daily for six weeks together half a pint of the decoction of *Foalfoot-Flowers* with a little Sugar, whereby she recovered.

XXXVIII. A certain Man was grown Tabid and wasted, and received no nourishment from the Food he took: he was nothing benefited by any of the Medicins he took, whether purging upward or downward: But being bled several times in each Arm, till almost all his Blood was taken from him, he was then at length relieved and cured of his Malady. *Hippocr. 5. Epid.* The Disease arose from a great dissipation of the Aliment all his Body over, and from an hot and dry Intemperies, which was either in the Flesh it self without an Humour, or was fed by a very hot Blood; in which Affection Purgers are so far from relieving, that they even increase the Disease, though a Melancholick Blood nourish'd the whole Body, and Melanagogues were given; because (as *Hippocrates* hath written in his Book of Purgers) when the Flesh is hot, it distracts or draws aside the very Medicin; how much more necessary was it that it should be distracted in this Person, in whom it was sucked immediately from the Stomach? Seeing therefore Purgers are hot and dry, they increased the Intemperies, and therefore all the Symptoms. Whence therefore could he rather expect help than from cooling of the Body, that upon extinguishing the heat the dissipation might cease, and this ceasing the sucking might cease? And for cooling the Body, no greater Remedy was invented by the Ancients than bleeding till the Patient swooned, or became almost without Blood.

XXXIX. A certain Lord being subject a long time to a salt Distillation, fear'd a Consumption: Namely the Hemorrhoids being stop'd, especially the External, there returns by the *Vena Cava* (and great Artery) a Bilious and Phlegmatick salt Blood, which in tract of time acquiring an acrimony, erodes the Vessels, whence comes a *Tabes*. But this Person was rid of all fear by having the Hemorrhoids flowing for two years, yea, the noxious Humour of his Body was thereby amended.

XL. For helping in some measure the lost Appetite, which is a common symptom with *Phthisical* People, I think there has not a more convenient Remedy been as yet discovered than *Elixir propriatiss* taken in Wine or other convenient Liquor to five or six drops about half an hour before Meal. For seeing this Elixir consists of Myrrhe, Saffron, and Aloes, with the Oil of Sulphur prepared per *campanam*, and the Spirit of Wine digested together; upon the account of the Myrrh, as also of the Saffron, it is good for the *Phthisick* and Cough; and the Aloes incides the Phlegmatick viscid Humour, and brings it forth gently and slowly, yea, and does attenuate the Pus it self: besides, all these are good for cleansing the Ulcer; so that it is a most convenient Medicin for a *Phthisis*, whose Acidity may be temper'd with a sweeter mixture

Gott. Christ. Winclerus, misc. Cur. an. 76. obs. 55.

Valles. com. in loc. See Lindanus in select. Exerc. 13. & 14. Beniven. c. 44. de abditis: Dodonæus annot. in id cap.

Rhod. cent. 2. obs. 9.

mixture wherein it may be taken. The same Medicine will likewise promote the fermentation of Aliments in the Stomach that is hindered by the toughness or clamminess of the Pus which is sent into all the Humours of the Body, and so likewise will lighten the weight that is troublesome to the Patients after Meal.

XLII. As to drink, Wine that is generous and also sweet is commended, such as Malmsey, and that which is not harsh; yet Claret is allowed in colder Climates; White is often found to be too acrimonious. And though that stronger Wine be never fully fermented, yet it is not therefore more hurtful, but more profitable. For by that part which is sufficiently fermented it recruits the Animal Spirits that are withal enfeebled, or not so well drawn out of the Aliments; and by that part which is not fermented it breeds laudable Blood, and supplies plentiful and profitable Matter for making Animal Spirit. In the mean while it is to be taken in a small quantity, and conveniently with Bisket, whether simple or sugared, by the help whereof it is longer stayed in the Stomach, affects the Brain less, and recruits all the faculties, as is clear from Experience.

Medicines especially made use of by eminent Physicians.

1. There is no better Remedy for a Phthisis than an healthful Womans Milk.
2. Take of the Blood of an Hog a year old and newly kill'd four pound, of the Leaves of Foalfoot and Scabious of each two handfuls, of the Conserve of Roses and Borage of each an ounce and half, of the Water of Foalfoot fifteen ounces: mix them and distil them. Sweeten it with *Manna Christi* as much as is sufficient, and take half an ounce of it every morning fasting. This is good in an Ulcer of the Lungs, and when the Body is wasted.
3. A decoction of Bugle in Mutton Broth is exceeding good.
4. Balm of Peru contributes much to the Cure of Ulcers in the Lungs, if a drop of it being made up into a Pill or two with Sugar be given daily.
5. These following Pills are of great efficacy: Take of the Mafs of *Pil. Ruffi* an ounce, of *Antimon. diaphoret.* and Gum Arabick, of each half a drachm; with Balsam of Peru make a Mafs of Pills, of which take a scruple every day for a Month.
6. Take of green Foalfoot eight handfuls, of Hyssop two handfuls, cut them, and put them up in an Earthen Pot with a little Water: Lute on the cover which must have a hole in the top, but so that the hole be also luted. Put the Pot in an Oven when the Bread is half baked, and take it out again when the Bread is baked enough, and opening the hole in the Cover put a Funnel in it, and so draw the Smoak by your Mouth into your Lungs, and breath it out again by your Nose. It wonderfully helps Expectoration.
7. Take of new Goats Milk four pound, of fresh Snails cleansed with Salt and good Water (and shaken a little that the Milk may the better penetrate them) to the number of twenty, of Rosemary, and if you please of Foalfoot and Wall-rue, of each so much as to make an handful in all: boil them gently to the consumption of a fourth part of the Milk: Strain it and keep it. Drink hereof every Morning and Evening about half a pint warm with an ounce of the Conserve of Roses, or with the same quantity of white Sugar-Candy.

The Pleurisy.

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I. It is an Opinion commonly received among Physicians, That that continued Fever which joins it self as a Companion to the Pleurisy, has its rise from a Phlegmon of the Membrane that lines the Ribs on the inside and is near the Heart, and so in respect of the Pleurisy comes under the notion of a Symptom. Nor does this Opinion altogether displease me. In the mean time I think on the other hand, that a Pleurisy comes under the notion of a Symptom in regard to that essential Fever with which the Patient was first taken, namely, before ever the Pleurisy superven'd; but when this comes on, the former Fever seems to lay down its genius, or rather to be changed into a Pleurisy, which now from the aforesaid Phlegmon acquires to it self a new Fever, and is attended by it: and this later Fever springing thus, walks hand in hand with the Pleurisy, and stands and falls with it. Indeed I think it would be very hard for any, upon diligent examination, to produce an Instance of a Pleuristical Person who was taken with a Pain in his Side (which is so full a sign of this Disease) before he was sensible of some attack of a Fever, at least a more light one: For that Pain sometimes indeed invades sooner, sometimes later; but (as far as I could hitherto observe) never but after a Fever; and hence (in compliance with mine own opinion) I number a Pleurisy amongst the accidents that follow a Fever. Now I suppose a Pleurisy arises from the precipitation of the Febrile Matter into the *Pleura* or Intercoastal Muscles, and that this happens indeed in the very beginning almost of a Fever, whilst the Matter is as yet crude and unsubdued by a fit ebullition, and so unprepared for a due separation by more convenient places: And this mischief is very oft introduc'd by the unseasonable use of hot Medicins, as the Countess of *Kents* Powder, &c. and with the intent generally, to provoke Sweat in the first invasion of the Fever. Because Nature being disturbed by this means, is compelled to expel the Humours as yet crude, by any way that lies open, and so the Febrile Matter is sometimes carried with violence into the Membranes of the Brain, whence comes a Phrensy; sometimes to the *Pleura*, whence a Pleurisy; especially where the Age and Temperament, and the Season of the year, betwixt Spring and Summer, do also concur.

Therefore for the removal of this Symptom I use this method. Forthwith I order (if the Case permit it) Blood to be let liberally out of the Arm on the same side with the pained side, and by and by some fitting Ointment to be applied to the Side; I also use Pectorals diversly accommodated according to the Circumstances of the Case: But Oil of Sweet Almonds newly drawn is the best

amongst these. For ordinary Drink I enjoin Beer that is small and not at all sharp, or a Pissan of Barley, Lykyrhize, and a few Aniseeds. Moreover on the following days, repeating Venesection, I order to Bleed freely, as the Case is: Truly I seldom give over Bleeding, till I have evacuated forty ounces, unless somewhat indicate to the contrary. And though one may (not without some shew of reason) be afraid that so great an emission of Blood should be dangerous; yet the Blood it self that is taken away, after it has stood a while, will make these fears vanish, seeing it is very corrupt, at least after the first time, and almost of the same colour with true *Pus*. Add hereto, that you will not find the Patient weakened proportionably to the great loss of Blood. But we must admonish, that there is need of *Cautions*, that Clysters be not injected through the whole course of the method, nor that any thing be added to the Pectoral Medicins which has a loosening vertue; for the more bound the Belly is, the more safely shall we repeat Phlebotomy: on the contrary, if you take but half that quantity of Blood I have mention'd, and use Clysters and Looseners withal, you shall bring the Patient in danger of his Life, whether it be because Nature cannot bear both Evacuations in so short a space, or upon some other account: and this holds not only in this Disease, but also perhaps in all others wherein the Cure turns upon this hinge (Venesection.) Indeed in treating this Symptom I have often attempted to establish some way of Cure, which might not proceed to so great a loss of Blood, namely, either by resolving the Humour, or evacuating it by promoting Expectoration: but I have not yet had the fortune to find any practice so available as the fore-mentioned.

II. Venesection is good in the beginning of a Pleurisy, because it keeps the Blood that is somewherehindred in its Circulation, from too great an Effervescence: but chiefly because seeing the Vessels are much emptied by this means, they receive again whatsoever Humours were thrown off, and so the Blood that begun to stagnate in the part affected, and make it fluxile. Likewise the Remedies that help most at the beginning of this Disease, are such as hinder the Coagulation of the Blood, or dissolve it whilst it is a Coagulating; such as those which do very much abound with a Volatil or Alkalizate Salt, namely the Spirit of Soot, Blood, Hartshorn; also the Spirit and Salt of Urine, the Powder of the Claws and Eyes of Crabs, of a Boars Tooth, or the Jaw-Bone of a Pike, are of notable use. Amongst the Vulgar 'tis customary to give an infusion of Horsedung; which Medicin indeed I have known often to help in almost deplorable Cases. In the mean time all Acids, because they coagulate the Blood more, and hinder Expectoration, do very much hurt in this Disease.

Seeing Bleeding is the most powerful Remedy, Willis, de it is never to be omitted even in Women with febr. c. 11. Child, or when they lie in, while their *Lochia* or Terms are a flowing: for Experience has taught that Women with Child even in their eighth Month, Childbed-Women, or Women that are not with Child whose Terms are flowing, yea, Infants and Children of seven years old are all very well relieved by opening the *Basilica* of the side affected. Each. Med. Pract. & River.

III. Though Blood-letting be chiefly profitable in the beginning, yet if it were omitted then, or were not large enough, a Vein may be opened even after the seventh, ninth, or eleventh day, by the Example of *Hippocrates*, who let *Anaxion* Blood on the eighth day, either because he was called no sooner, or because in a very Crude Pleurisy, which hardly begun to be concocted on the eleventh day, the Disease granted truce. But when a free and liberal Expectoration begins, then we must abstain, because it is thereby suppress, and

Sydenhami

Lazar.
River.

and the Patient brought into danger of his Life.

IV. *Hippocrates* (2. de rat. viſſ. in acut. t. 10.) hath deliver'd to Poſterity an excellent Rule, and ſuch as is very profitable in practice, to let Blood till it change its colour. Namely, if at the firſt or ſecond Bleeding the Blood appear Crude, Phlegmatick, or Watry, the Evacuation is to be continued every day, or twice a day, till the Blood that is drawn look red, or yellowiſh: But if it come forth red at the beginning, Venefection is to be repeated ſo often as till it appear livid or black; for 'tis ſignified that the later Blood flows out from the part affected, or the Veins that neighbour upon it, which indeed is alter'd by the heat of the inflamed part, and of crude is made red, or of red is made black or livid by aduſion. Now though the obſervation of this Precept do for the moſt part ſucceed well in practice; yet ſometimes that change of colour is not pertinaciously to be expected, but we muſt deſiſt from Bleeding ſooner, namely when either the Patient is weak or his Spirits low, or he is of a rare and very reſoluble habit, or the Season is very hot.

Idem.

V. Some think that Diſeaſes which draw their origin from a ſuppreſſion of the Terms or Hemorrhoids, are only to be cured by opening the Veins in the Leg: which I willingly grant ought to be done in Chronical Diſtempers, and ſuch as give truce: but in Acute Diſeaſes, ſuch as the Pleuriſy, a Vein is not always to be opened in the Ankle or Foot, but a diſtinction is to be uſed. For if ſuch Evacuations as uſe to happen at certain ſtated times, be ſuddenly and wholly ſuppreſſed, and there be manifeſtly perceived a motion of the Blood to the upper parts, and an afflux thereof to the Side, the Cure is by all means to be begun by opening the Ham Vein or the like: But if the ſuppreſſion be now of long continuance, whereby there is accumulated by little and little a *Plethora* or ſome *Cacochymie*, and an abundance of Humours in the upper parts, and alſo it be not near the ſeaſon of the Terms, then the Cure is to be begun by opening a Vein in the Arm; for the Acute Diſeaſe requireth it, nor permits it delay till the Terms or Hemorrhoids be again provoked; for it may be whiſt we are taking pains to procure the Terms or Hemorrhoids, the Patient may die through the violence of the Diſeaſe: but the ſuppreſſion of the Terms or Hemorrhoids endure delay, and regard may be had thereto afterwards, when the Patient is paſt the danger of the Acute Diſeaſe, and endeavours may be uſed to provoke the ſuppreſſed Blood.

Sennertus.

VI. Nor muſt we omit to admoniſh, ſeeing a Pleuriſy does oft follow or accompany a Fever and primary Diſeaſe, which often has a notable malignity joined with it, (as uſes to happen frequently in an Epidemical Pleuriſy), that diligent regard is then to be had to the Malignity; and it is to be conſidered whether it admit of Venefection. *Gefner, lib. 1. Epistol. p. 19.* makes mention of a certain Epidemical Malignant and Contagious Pleuriſy of which many died, and wherein Bleeding in the Arm did no good; but Bleeding in the Ankles, and Sweating in the beginning by a certain Antidote, gave more relief: And by all means in ſuch Malignant Pleuriſies the Malignity is firſt to be aſſailed, and other things to be done afterwards.

Sennertus.

¶ The ſame *Gefner, Epistol. 49.* ſays, In this Pleuriſy I found nothing better than half an ounce or more of Linſeed Oil, which preſently relieves the Breath, and very well evacuates the Belly. Hence it is that *Aſclepiades* in *Cælius Aurelianus* teſtifies that at *Athens* and *Rome* he ſaw the Pleuritick become worſe by Venefection; but in *Parus* and the *Helleſpont* that they were relieved by it. *Wierus* in his *Observations* (p. m. 53.) mentions a Peſtilent Pleuriſy which went about in the years 1564, and

1565. in ſome parts of the lower *Germany*, where in it was obſerved that Venefection was very hurtful: Thoſe things which are preſcribed in other Pleuriſies to help Expectoration, could do no good through the increaſe of the Febrile Putrefaction and Peſtilent Poiſon: And contrary to the obſervation of the common Rule, they were to be helped by the giving of Acids, as the Syrup of the Juice of Sorrel, Lemons, &c. as alſo by Pectoral Potions prepared with a mixture of bitter Medicines, &c.

I will ſpeak a few things of that, which is common in every ones mouth, that a Pleuriſy is ſometimes found ſo malignant, that for thoſe years it cannot admit Phlebotomy, at leaſt not ſo often repeated as this Diſeaſe commonly requires. Indeed I think that a true and eſſential Pleuriſy, which infeſts indifferently in all Conſtitutions of every year, does every year indifferently indicate Venefection to be repeated alike; yet it ſometimes happens that the Fever of that year that is properly Epidemick, is apt upon any ſudden change of the manifeſt qualities of the Air, to depoſite the Morbiſick Matter in the *Pleura* or Lungs, and the Fever notwithstanding remain altogether the ſame. In this caſe as Venefection may be granted to relieve this ſymptom, if it rage much; yet to ſpeak generally, we ought not to draw forth much more Blood upon the account of the ſymptom, than ought to have been drawn forth on the account of the Fever, on which that ſymptom depends. For if this be of that nature as to admit of repeated Bleeding, it may be repeated in the Pleuriſy, which is a ſymptom of it: But if the Fever admit not of repeated Venefection, the ſame will not help, yea, it will do harm in the Pleuriſy which will ſtand or fall with the Fever. And this indeed I was therefore bound not to conceal, becauſe I think that he wanders in a doubtful Path, and is led by an uncertain Thread, who in the Cure of Fevers has not preſently before his Eyes the Conſtitution of the year, as it inclines to the production of this or the other Diſeaſe epidemically, and to turn all other Diſeaſes that concur with it into its own like- neſs and form. I thus treated a Nobleman ſick of this Fever: He complained of a pain in his Side and of other ſymptoms of which the reſt did that were taken with the ſame Diſeaſe: I Bled him no more than once, I applied a Blistering Plaster to his Neck, I gave him Clyſters every day, ſometimes order'd him cooling Ptiſans and Emulſions, ſometimes Milk and Water, ſometimes ſmall Beer; I adviſ'd him to riſe out of his Bed and ſit up every day for ſome hours; by which method he was recovered in a few days, and after Purging was quite well. See the ſixth Book of a *Pleuritick Fever*.

Syden. obſ.
circa morb.
acut. p. 362.

VII. 'Tis a doubt whether the Blood flowing from the Womb, either in Childbed, or out of it, hinder Venefection when a Pleuriſy happens? Before the ſolution of the doubt, I ſuppoſe that Bleeding is uſed upon a twofold account in all Inflammations, firſt, to revel the violence of the flowing Blood; ſecondly, for derivation: that is, that by one and the ſame track we may both evacuate and revel. If a Woman therefore be taken with a Pleuriſy whiſt her Womb flows, we muſt conſider whether the original of the Fluxion be from the Womb it ſelf, or the Humours flow thither from ſome other place? Moreover we muſt have regard to the manner of the Fluxion; for it is either large and ſudden; or ſlow. A ſudden Evacuation made out of the Womb, answering in proportion to the Fluxion upon the Membrane that inveſts the Ribs, indicates that the buſineſs is to be committed to Nature, and nothing to be innovated: But we ought to help a ſlow Fluxion, that by two Evacuations, the one Natural, the other Artificial, we may obtain our deſires. For if we ſhall heſitate in a great and precipitant Diſ-

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ease, we run great dangers: In this case we shall let Blood in the Ham or Ankle; or we may scarify the Thighs or Legs if we know there is but little Blood remaining, and the Woman look white, have soft Flesh and slender Veins: But whether one or other kind of Remedy be to be used, the nature of the Matter will teach, especially the greatness of the Disease and the Constitution of the Patient, &c. But if the original of the Fluxion shall not be in the Womb, the Case will not be so easy: I use to clear it by distinguishing thus: The Womb at that time does either make plentiful and sudden Expurgations, or such as are lingering and slow: If the first, we shall not let Blood, but be content with the spontaneous Evacuation; for seeing the Womb has great Veins and Arteries which communicate with the whole Body, and a very great consent with the Breast, we may hope that there will be made a good Revulsion hereby, in what part soever the original of the Fluxion be. But the case is not the same when from custom, or from any other Preternatural Cause the Womb evacuates Blood very slowly: For seeing we need some speedy Remedy, that the violence of the Fluxion may be restrained, whereas this is very sluggish and slow, so that we ought by no means to commit the task to it, we ought therefore in such case to Bleed. What Vein therefore, you will say, shall we open? Truly I would open some one of the upper, 1. because the lower are too far distant from the original of the Fluxion; nor can they remove the Fluxion but in a long time, which will not do our business; 2. seeing we ought to attend that which is more urgent, and seeing the Pleurisy is more, yea, most urgent, therefore we must endeavour with might and main that the Phlegmon may not be increased, which may be done by opening a Vein in the Arm, which we judge to be convenient for Revulsion. And though there follow that inconvenience hereby as that the Terms come to be stop'd, (which they may chance to be) yet that inconvenience is but small, and may be amended at some more fitting time, even with ease. But if we desire a derivation, when there has preceded a Revulsion made either by Nature or Art, or also when the Disease has not required it, I declare this one thing, that whether the Womb have flown or no, or also whether it have been plentifully purged or not, the inner Vein of that Arm which is nearest to the part affected is always then to be opened, and Blood to be let till there appear change of colour: for nothing ought to hinder us from relieving the Pleurisy presently, which is a doubtful and dangerous Disease. For if we must have respect to that which is more urgent, there is no doubt but we ought to be far more concerned about the Pleurisy than about the Purgations of the Womb, especially seeing these may be provoked from the omission of Bleeding, can by no means be redrest.

Hor. Auger.
tom. 1. l. 11.
Epist. 3.

VIII. A lean and very Choleric Woman, falling into a Pleurisy, desired earnestly to be let Blood: but though a Vein was opened timely enough, yet the Blood was drawn so strongly towards the Breast through the very violent pain thereof, that hardly any would spurt out of the opened Vein: But she being bid to endeavour to drive the Blood from the Breast again towards the Arm by strong coughing, I observed it to spurt forth freely, and the Woman was shortly eased of her pain. Wherefore let any one in the same case fly to the same succour: let him presently raise a Cough, and by that means the Blood will be repelled to the Arm. This invention I have seen to succeed happily with several since that time.

Tulpius,
l. 2. c. 3.

IX. A true Pleurisy will not invade the Phlegmatick, and such as are troubled with Acid Belchings: yet there often happens a Pleurisy in these Countreys (Holland) from a watry and thin

Phlegm, but that is not true and exquisite: For in these cold and Phlegmatick Bodies there often arise grievous pains of the Sides from *Flatus*, which may be mitigated by fomentations: if you bleed, you will kill. I once saw a very beautiful Woman, who being subject to *Flatus*, and having supt liberally, fell into a bitter pain of her Side in the night; and died presently upon opening a Vein.

Heurn. com.
in aph. 33. 6.

X. It is observable that there sometimes arises a difficulty of breathing from an ill ordered Diet; in which case Physicians do ill to Bleed. ¶ Their confidence seems pernicious to me, who so long as the Patient complains of pain, give not over bleeding, without any regard to the suppuration, which has not only made some progress, but is often also perfected within the first seven days: by which importune Bleedings, repeated even ten times or oftner, they cruelly weaken their Patients by exhausting their Vital Spirits with the Blood, though their strength be altogether necessary for a perfect Expectoration of the Pus, which oft cannot be obtained but in several months space.

Idem.

XI. Let us take heed not to bleed those who are emaciated by a long *Taber*, when they fall into a pain of their Side. For I have seen many such Bodies dissected, and observed their Lungs to be preternaturally close grown to the Membrane that covers the Ribs: so that when a windy Vapour gets in betwixt this Connexion, it pulls off the continuity and so causes the Pain. ¶ This Pain is taken away and cured by heating things, as by a fomentation of the Flowers of Chamomel and Cummin, which hath benefited many: They must be put up in a Bag, which being dipt in White Wine is applied hot to the pained part. Those who are so rashly bold as to Bleed, take away so much of their Patients Life as they do of his Blood.

Car. Piso de
colluv. ferof.
p. 3. 4.

Heurn. lib.
de morb.
pect.

Dodon. obs.
cap. 22.

XII. Experience sometimes shews that the saying of *Hippocrates* (aph. 31. sect. 5.) is not always true, viz. If a Woman with Child be taken with an Acute Disease, it is extream dangerous: for sometimes both the Mother and Child escape danger. While I was a Printing these things, I was called (June 27. 1681.) to a Woman about Thirty years old, the Wife of one *Bardot* a Tanner, that was nine Months gone with Child: She was slain into a very grievous Pleurisy on her left Side by travelling in the Sun and drinking of Wine: She was Plethorick, and her Face was much flushed. Premising a lenient and cooling Clyster, I order ten ounces of Blood to be taken out of the Arm on the Side affected, which came forth purid with some relief: The next day, because she was vexed with an Acute Pain and spit Blood, I bled her again to seven ounces, which looked more corrupt than the former; and therefore, though her Husband was against it, I prescribe a third Phlebotomy on the day following; upon which the Pain not yet ceasing, and the redness of her Face with signs of a *Pleurora* continuing, I advise a fourth Bleeding, though both her Husband and the Women were against it: upon which fourth Venesection (the Blood looking still worse) the Pain quite ceased, and she coughed up easily. On the fifth day of July she had an easie labour of a Girl that was plump and of a good Constitution; and her *Lochia* flowing orderly, she not only lived, but was freed of both her Pleurisy and Fever, &c. The Disease was the more grievous, because besides that the faculty of breathing was intercepted by the greariness of the Phlegmon and the vehemence of the Fever, the *fetus* kicked and sprawled strongly against her Diaphragm.

XIII. 'Tis not necessary to let those Blood who have Fluxions often fall from their Heads, through abundance of Crudities, presently upon the invasion of the Disease, especially if they cough up easily, and what they cough up be white or bloody,

and

and the Pain light: for a Flatuous Substance uses so to distend the Veins of the *Pleura*, that the Pores being rarefied the Blood issues out with pain, and is expelled by coughing, imitating a Pleurisy: wherein if you let Blood, you will do as much hurt as if you did so in the weak and Catarrhus who are ill of a light Fever. ¶ In a Pleurisy that is caused by a defluxion from the Head, Venesection has no power to draw back the Rheum that is in motion, nor to withdraw that which is settled, and therefore it does much harm in increasing the Catarrh by the generation of cold, and in exciting the same by weakening the retentive faculty.

XIV. Seeing the first indication is, by all means to take away as soon as may be the Phlegmon or Obstruction of the Blood in the *Pleura*, for this purpose Bleeding has used to be prescribed as the chief Remedy by all Physicians in all Ages (except some Fanaticks and Pseudochymists :) The reason whereof is altogether the same as in a Peripneumony and many other Diseases, that are caused by the stay and collection of the Blood in some place: namely, that the Blood-Vessels being much emptied, may not only cut off the fomes of the Disease, but also reformed and carry to another place the Matter which is the Conjoint Cause. Wherefore bleed very freely in a Pleurisy if the Patient be strong and his Pulse big: And truly 'tis far better to bleed largely at first, and so every time afterwards, so often as 'tis necessary to repeat Venesection, than to bleed often a little at a time: In as much as very many portions of the slimy and viscous Blood are collected about the part affected, which unless they be called away from thence by emptying the Vessels very much by a plentiful Bleeding, and be suffer'd to flow out the greatest part of them, the desired effect will not succeed. So that when some Physicians prescribe Blood to be let in a Pleurisy even to fainting away, it seems not to be incongruous to Reason, though that practice is not to be rashly undertaken, because every Evacuation ought to be proportion'd to the tenour and tolerance of the strength, which Rule such Phlebotomy exceeds.

XV. In the year 1679. May 9. I was called to one *Vilars* a Baker, a Man of about forty, lean, melancholick, and who had used to be troubled with a pain in his Spleen. This Person had been ill of a Quartan Ague for seven Months, having got rid of it a Month before he was taken with a violent Pleurisy of his right Side, with a very Acute Fever. On the second day of the Disease he had gotten himself let Blood, which was very putrid, without any remission of his Pain. His Water was very high colour'd, thinning whilst it was hot, and depositing a red tartar when it was grown cold: Wherefore I order him to be bled again, and his Blood was putrid as it was before, without any easing of the Pain, his Spittle crude, which he could hardly bring up, and without any remission of the Fever. On the sixth day of the Disease he is bled again, a corrupt Blood still coming forth, and all things abiding in the same state: On the seventh day there came a plentiful Sweat, which continued to flow to the end of the eighth, whereupon the Fever grows more mild, the Urine is not so high colour'd, and Expectoration proceeds better. On the ninth day the Fever grows worse, wherefore I order Bleeding again (always out of the right Side) because his strength held up still, and his Pulse was full and strong; the Blood was still corrupt. On the tenth day the Fever is much milder, the Pain in his Side ceases, his Urine is concocted and with a laudable sediment. On the eleventh day his Fever was quite gone: On the twelfth I gave him a Purge, upon which he recovered. The first three days he was troubled with a Vomiting, which ceased after the second Bleeding, whence I thought there had been a Peripneu-

mony; for such whose Lungs are inflamed, do often Vomit.

XVI. A great Disease requires that a great deal of Blood should be evacuated: for here it matters not so much what sort of Blood you draw, as in what quantity. I had a Patient that had a very great pain in both his Sides; I took away above four pound of Blood at one time, and he recovered with the help of God, though he was given over by all as gone. *Avicen* affirms there are twenty five pounds of Blood in the Body, and that seventeen may be poured forth in one day without destruction. *Galen* seems to have taken six pounds of Blood at once. But that we may comprehend the limit of the quantity, we must observe the strength.

XVII. Those who have a pain in their Side from thick and viscid Humours are not to be let Blood: for sometimes thick and viscid Phlegmatick Humours issue into the Cavity of the Breast, and into the Lungs themselves, which by their multitude distending the investing Membrane cause pain, and intercepting the passages of Respiration induce a difficulty of breathing: so that to bleed these, especially plentifully, is to hasten their death.

XVIII. The Matter is to be drawn outwards when other Evacuations proceed not well. And therefore in this case I will take *Actius's* Counsel, to scarify the pained part, and after Scarification to apply a Cupping-Glass, and upon the removal thereof to lay on some Acrimonious Medicin, whether it be the *Sacrum Ceratum* or any like it, and the next day to set on a Cupping-Glass again: so that the Matter may be brought forth by little and little both by the help of the Cerecloth and the Cupping-Glass. The like may be done also in such a case by a Veficatory. If the Disease yield not to these, then there is no hope. ¶ *Paulus Saxonius* applies not a Cupping-Glass before the fourteenth day, if the Malady continue so long; but *Trallian* sometimes makes use hereof at the beginning, and that not without Scarification; especially in such as seem not to have much Blood in their Veins: He scarifies the place deep with a Lancer, and sets a Cupping-Glass thereupon, that that which lies deep may be drawn out. Upon doing of this, says he, 'tis wonderful to see that how great soever the pain have been, even though the most violent, it ceases presently, so that it neither needs fomentation nor other Remedy. ¶ The use of Cupping-Glasses, says * *Rubeus*, being opportunely applied, especially to the Back, may be very profitable in a Pleurisy, because many twigs that spring from the branches of the *Vena sine pari*, that tend to the Intercoastal spaces, belong to the External Muscles of the Back, and from thence are extended out of the *Thorax*. But lest Matter should be drawn from other where to those parts, 'twill be better to apply Cupping-Glasses to the Buttocks also at the same time. Of the use of Cupping-Glasses see more in *Joubertus* in the Chapter of the Pleurisy. ¶ A Boy of five years old was taken with a Pleurisy on his left Side with a very Acute Fever. After the ordinary Remedies used for five days, and four times Bleeding, two Cupping-Glasses were applied to the pained Side with deep Scarifications. From that which was next to the pained place there flow'd a great deal of Matter for a whole day, and both the Pain and Cough ceased. The Leaves of Beer were laid upon the Scarified places, and the Flux of the *Sanies* continued for two days, and in the end true Pus flow'd out of the Wounds, and so the Patient was quite cured. I believe the Scarifications reached to the place of the Pleurisy, and that the Morbifick Matter flow'd out by those places.

XIX. Whether has the Chirurgical Operation, called *Paracentesis* or Tapping, place in the Cure

Mercatus.

Duretus, comm. in Coacas.

Horn. lib. 12. Inst. med.

Dodon. obs. c. 22. in schol.

* Comm. ix. cap. 6. l. 4. Celsi.

Riv. cent. 3. obs. 39.

Rolinc.
conf. 3. l. 5.

N. Tulp.
lib. 3. obs. 4.

of a Pleurisy? I answer, it has not place in the beginning, but after suppuration, yet not always: For it may so be, that part of the Matter may be evacuated by the hole that is made, and a greater part retained, and a Fistulous Ulcer be left which will prove mortal at length. ¶ A Widow of sixty in a Pleurisy collected a great deal of Pus in her Thorax; the load whereof that officious Nature might expel, she shewed as with a Finger a place betwixt the Ribs that evidently protuberated: which the Surgeon perforating, the Patient outlived this seemingly dangerous Operation, and cast out daily a stinking and fordid Pus through the Wound that was made. Which Incision of a suppurated Side I have indeed oft seen performed, sometimes truly with good success, but oftener with bad; either because it hinders the motion of the Lungs, or because it commonly continues so long that the strength either of the whole Body, or of the Breast alone cannot bear up under it; for the cold and indigested Air does so weaken the Viscera contained in the Breast, that those seldom escape death who have the Pus drawn out this way. ¶ I saw a successful Operation in the year 1660. in a Pleuritical Woman thirty five years old, who keeping no pipe in the hole, it closed up in a few days, having first discharged a great deal of Pus; the remainder whereof Nature expelled by Urine. The occasion of this Operation was a Tumour jetting outwards, and the weight of the Side affected, and an absence of Expectoration.

XX. Jac. Fomannus, Pract. l. 2. c. 4. mentions a Malignant Pleurisy, which a thin greenish Humour causes, (whether collected in the Side, or flowing down thither) as was discovered by the dead Bodies opened, wherein was found an Impothume full of a liquid greenish Liquor: for which the only and singular Remedy is Section, because there is no hopes of Maturation. But seeing he declares nor the manner of Section, I think it more advisable to do it with a red hot Knife, because that way is not Bloody, and 'tis more accommodate for Concoction, which is so greatly to be desired. Add hereto what an Anonymous French Author hath writ in a Book de Cucurb. In a Pleurisy, says he, the Side is sometimes pierced; for if the Patient can neither be cured by Fomentation, nor Bleeding, nor other Remedies, and the case be otherwise desperate, Incision is made in the Side after the seventh day according to Archigenes and Aetius, after the fourteenth according to Paulus; a Cupping-Glass is set upon it; the Wound is hindered from closing up by putting a Tent in it wet in Oil; the next day the Cupping-Glass is applied again: on the first day Blood, on the second Sanies will flow out with great relief. But this is hardly attempted in our times, because it is a kind of cruel Remedy; though it may seem more Human, than to leave the deplorable Patient to certain death.

XXI. If the Physician guess, from the colour of the Blood let forth, and from other signs, that there lurks a Cacochymie in the Body which feeds and increases the Disease, we must come to purging, especially if it be perceived to tend toward the first region of the Body, from rumblings of the Belly, Vomiting, loose Stools, anxiety about the Stomach: But it is to be done betimes. Hippocrates, 4. Acut. aph. 6. determines the fourth day simply for purging. But Galen writes rightly, that such things ought not to be enjoined the Patient simply according to the number of days, but that what Hippocrates hath determin'd ought to be follow'd, and therefore we must purge presently in the beginning, or afterwards when the Humours are brought to maturity: for which cause he writes that he sometimes gave a Purge on the first day, or the second or third, and sometimes on the fifth. Therefore the Humours that abound in the

common Ducts, and are apt to flow to the part affected, are to be purged in the beginning, at which time aversion is the most desired; but afterwards when the Disease comes to its vigour, and the Humours are concocted, 'tis better to be quiet. ¶ I deny not that a Revulsive Purgation is sometimes convenient in the beginning, (though seldom) but it must be attempted by mild Medicines, and (as Vallesius says in Epid. or Galen himself) the Fever must not be high: Let Blood be let sufficiently, and the Humours must degenerate from the nature of the Blood, and the faculty must be strong to bear the Medicin, and the Constitution of the Patient well known.

XXII. So much as Venesection profiteth in a true Pleurisy, so much doth purging hurt, though never so kindly and gentle; for by moving the Humours it increaseth the Fluxion; or if the Fluxion had already stayed, it renews it to the great damage of the Patient. Add hereto, that a looseness is bad in Diseases of the Breast; wherefore we must refrain from Catharticks the whole Course of the Cure: the Belly is only to be loosened every other day with an hard Clyster.

XXIII. Hippocrates, 2. Acut. v. 21. advises to open a Vein when the pain reaches up towards the Collar-Bone; but to loosen the Belly, if it descend under the Midriff: for it is no new thing for Pleuritical pains to be felt sometimes under the Midriff. For what hinders why when an Inflammation seizes upon the Pleura, part of the Morbifick Matter that is diffused below through the fleshy parts, should not by pain give signification of it self under the Midriff where the Side is soft, or in the region of the Hypochondres? Surely nothing. Hippocrates testifies this (1. de Morb. sect. 2. v. 220.) treating of a true Pleurisy: And sometimes, says he, it causes a pain in the parts below the Side. And he teaches the same, 1. de loc. v. 258. & 3. de morb. v. 230. And 'tis reasonable that that should happen, seeing the Morbifick Matter inclines by its natural gravity rather downwards than upwards. Attending to this inclination of the Humours (according to the vulgar saying, *We must lead by convenient ways, whither Nature tends*) when the Disease tends downwards he propounds purging by the lower parts; but Venesection rather, when 'tis more inclinable to the upper parts. He thought this distinction so necessary, that he esteemed him who proceeded otherwise not to benefit, but to hurt. For as Bleeding takes not away the pain that reaches below the short Ribs; so Purgation is unprofitable when the pain possesses the upper parts and extends it self to the Collar-Bone. For whilst the Humours which tend upwards, and which may easily be evacuated that way, are drawn downwards by Stool, Expectoration is hindered, than which nothing is more hurtful in a Pleurisy that extends upwards. For seeing the Matter contained in the Breast is not brought forth by the Purge; the Spittle (as Hippocrates says) being retained, and sticking in the Lungs, causes difficulty of breathing, and not long after the Patient dies of Suffocation. Now 'tis ealie to give a reason why we should Bleed when the pain extends upwards, and Purge if it descend below the Midriff; for as often as a Pleurisy depends upon a Plethora and is fed by it, a pain and weight seizes upon the upper parts, because there are Veins there which are joined with the Veins that are dispersed through the inflamed part: whence those being filled that are in the place of the inflammation, and cannot contain all the plenty of Blood, the upper that are continuous to these must needs be filled and extended; whereupon the bordering parts happen to be pained and grieved. But some will say, Why does not that happen in the inflammations of other parts, where we see only those parts to be pained wherein the inflammation is? I answer, It is peculiar to these parts,

Enchir. Med.
Practic.

parts, viz. the Sides, as being Membranous and not Fleſhy, not to be ſo capable of a plenty of Humours as the Fleſhy: whence when Humours flow thereinto, the Veins thereof are ſo filled, that their extension is communicated to the neighbouring parts, whence there happens a dilatation of the pain. Therefore becauſe a dilatation of the pain ſuppoſes a plenitude towards the upper parts, which can be taken away better by no Remedy than by Venefection; *Hippocrates* does therefore adviſe Bleeding in this caſe. But when a Pleuriſy depends upon a Cacochymie, the pain is not communicated to the aforeſaid upper parts, becauſe the Veins are not ſo filled that their diſtention ſhould reach to the upper parts; yea inclining to the lower, it infects the parts under the Midriff: for every Humour, except the Blood, uſes to tend rather downward than upward, becauſe it partakes leſs of Spirits, by whoſe virtue the Humours in the Body ſeem to have neither lightneſs nor gravity; for Blood alone wants the motion of gravity or levity, becauſe it is governed by the Spirits which it is plentifully endued with: but the other Humours do deſcend by a natural gravity rather than aſcend, unleſs ſome cauſe concur that may raiſe them to the upper parts, or may hurt by Vapours, as otherwhere we have ſaid does happen to the Bile, which being in the Stomach cauſes pain in the Side. Therefore becauſe a pain deſcending to the Hypochondres indicates the Pleuriſy to ariſe from a Cacochymie, whoſe Remedy is Purgation, therefore *Hippocrates* approves of this in ſtead of Venefection, not only in this caſe, but as often as it happens that a Pleuriſy ariſes from a Cacochymie. Whence 3. *de morb. v. 284.* he ſays, If the ſick Perſon be naturally Choleric, and being not purged be taken with a Diſeaſe, you ſhall purge Choler well: for theſe things concurring, a Cacochymie muſt needs prevail. Seeing therefore *Hippocrates* hath left us this practice approved by long Experience, and confirmed by evident Reaſon, I cannot ſufficiently admire at *Galen's* boldneſs, who perverting it, durſt write that it was always ſafer to Bleed: but much more at the Phyſicians of our time, with whom purging is ſo familiar, that they can omit it in no Diſeaſe or Patient, making uſe of it often even againſt the Rules of former Phyſicians, and yet they are ſo afraid of it in a Pleuriſy alone, that they dare not give even the ſlighteſt Purge to a Pleuritical Perſon. For in truth *Galen* did not diſallow of Purgation when a pain is below the Midriff, but he ſaid thoſe things to admoniſh us that we ought to uſe it with great caution, ſo as that if we meet with any difficulty in purging, we ſhould abſtain from it and flee to Venefection, as being ſafer, though it do not diſſolve the pain (as *Hippocrates* ſays) ſo well as fit purging would do. As oft therefore as no great impediment gainsays, we may ſafely purge: About which ſome things are to be conſider'd, and firſt, That it be adminiſtered placidly, which *Hippocrates* intimates, ſaying, *We muſt looſen the Belly.* Secondly, That it is not to be procured by every Medicin indifferently, but ſuch as is agreeable to the Diſeaſe, like that which he propoſes of wild Purſlain and black Hellebore corrected with ſome of the *Aromata*, which though it be eſteemed ſtrong now a days, yet I have found it gentle enough when given in a moderate Doſe. But whether Manna and the Syrup of Roſes ſolutive, which I ſee ſome uſe, be alike profitable, I dare not affirm. I know indeed that theſe differ quite from the Medicin of *Hippocrates*, for they draw out thin and ſerous Humours, and do not a little raiſe *Flatus*; but * wild Purſlain and Hellebore draw forth thick and aduſt Humours, and, as *Hippocrates* ſays, diſcuſs *Flatus*; beſides, theſe are bitter, thoſe very ſweet. But whether Manna may not be uſed in ſtead of thoſe Medicins which *Hip-*

*Peplum.

ocrates gives in Pleuritical Sorbitions, I will not contend, if the Patient be of a weak Conſtitution and cannot endure a ſtronger Medicin: Otherwiſe I ſhould truſt more to *Hippocrates's* Hellebore, and to Scammony, put into the Juice of Piſtan with the Powder of Aniſeeds. If any ſuſpect *Hippocrates's* Opinion, becauſe of that which he has ſaid, 4. *ſc. 8.* *Whoſoever attempt to diſſolve preſently at the beginning thoſe things which are inflamed, &c.* let him read *Valleſii's* Commentary, or my Expoſition.

Proſper Martiani, comm. in ſilum locum.

XXIV. The Wife of Mr. N. had an *Eryſipelas* in her Leg for ſeven or eight days, with a continual Fever, and was cured of both Diſtempers by the care of her Phyſician: Afterwards ſhe expoſtulated her ſelf too ſoon to the cold Air, whereupon ſhe fell into a pain in her Side with a Fever, Cough, and difficulty of breathing, and ſometimes there were ſtreaks of Blood in what ſhe cough'd up: She was Bled twice or thrice, and other things were adminiſtered. I was call'd on the fifth day of the Diſeaſe; I thought that a Purge was to be given the next day, which ſeem'd to be againſt the Rules of Art, by which it is declared that a Purge is not to be given before the ſeventh day: But the following Reaſons induc'd me: 1. Becauſe the Pleuriſy ſeem'd not to be legitimate, bred from a collected or contractive Inflammation, but rather from a certain ſpurious, thin, and ſerous Fluxion; or alſo from Acrimonious Vapours raiſed from a Cacochymie contained in the lower Belly, and twitching of the *Pleura*. I concluded thus, becauſe there appeared Blood only in one or two Spittings, and that but very little like a Thread, which could not come in ſo ſmall a quantity from the inflamed *Pleura*, but rather from ſome ſmall Vein opened by the violence of the Cough: or it might deſcend from the Head, ſeeing ſhe had ſuffer'd a ſlight Hemorrhage about the ſame time. 2. Becauſe the pain was not continual, but ended and returned by intervals, with a very remiſs Fever. 3. Becauſe through the whole time of the later invaſion ſhe wak'd continually, though the pain of her Side did intermit very much even on the night; where-by one might gather that thoſe great watchings depended rather upon the putrefaction of the Humours and an eſſential Fever, than on a true Pleuriſy. 4. Becauſe all the time ſhe had had the *Eryſipelas*, ſhe had refus'd the Purge which was preſcribed her, and ſo the whole hoard of the Cacochymie remained ſhut up within. Therefore ſhe took a Purge on the ſixth day of the later Diſeaſe, of Senna, Rhubarb, Manna, and the Syrup of Roſes, by which ſhe was gently purged with good ſucceſs: for the pain in her Side remitted preſently, nor was ſhe afflicted any longer with want of ſleep, but only a little feveriſhneſs appeared towards night: afterwards by the help of ſome ſlight Remedies ſhe was thoroughly recovered.

River. gent. 4. obſ. 18.

XXV. To take away a Phlegmon of the *Pleura*, beſides the taking away of Blood by a large Phlebotomy or by Scarification, the ſerous and other Rectemmeritious Humours ought likewiſe to be gently expelled both out of its Maſs, and alſo out of the Bowels by Stool, Urine, and Sweat. The ſtronger Purgers are rightly forbid, becauſe they exagitate the Blood and cauſe it to be fixed deeper in the parts affected. And though ſome famous Chymiſts, viz. *Ang. Sala*, *Mart. Rulandus*, *Hartman*, and ſeveral others do give ſtibiæ Vomits to all Pleuritical Perſons, and cry them up as the beſt Remedy; yet truly this ſeems to me neither ſafe nor conſonant to Reaſon: The only way, as I think, that they can come to help, which alſo is very uncertain and dangerous, is this, viz. that the Medicin operating violently, whiſt their Spirits are diſſolved and they faint away, all the vigour and turgence of the Blood quails, and thereupon the Nervous Fibres remit their painful

(* A a a)

Corru.

Corrugations or Contractions, and the Sanguiferous Vessels being very much emptied resorb the Morbifick Matter. In the mean time there is danger lest the Humours being violently moved should rush more impetuously to the part affected; at least lest the Spirits being too much dejected, and the work of Nature about the concoction or separation of the Morbifick Matter being disturbed, the strength should fail before the Crisis of the Disease.

XXVI. Many Practitioners are much afraid to attempt the Cure of any great Disease of the Pleura by Vomitories: yet Rulandus and Hartman often gave *Aqua benedicta* with benefit. Riverius, in obs. comm. 29. also commends this kind of Remedy: All Pleuritical Persons, says he, that vomit presently in the beginning of the Disease, escape, as I have observed in very many, the Pleura being eased of the load of Humours by the help of Vomiting.

XXVII. Gentle Diureticks that are not very hot, are very good, according to Galen, apb. 44. 6. loc. aff. 4. and Hippocr. 1. Epid. 2. For there are several ways of purging out the Matter in the Breast, according to Hippocrates and Galen. ¶ *Provolitus* observed that a Pleurisy of the left Side is for the most part deposited by Urine; wherefore in this case he gave the milder Diureticks with good success, amongst which *Diacuminum* was very familiar with him. ¶ If Spitting cannot succeed, the Matter is to be evacuated either by Sweat or by Urine, or by Externals, or a suppuration is to be endeavoured. For provoking Urine Turpentine is commended in this case, either alone or mixt with the Poudre of Lykorrhize. Give a drachm of it, and let it be wash'd in the Water of Maidenhair, to which add half a drachm of the Poudre of Lykorrhize. Yet these Diureticks ought not to be administered in every case, but only when you see the Spitting does not proceed, and that the Patient pisses plentifully: For Hippocrates said (4. acut. 28.) that those Pleuritical and Peripneumonical Persons are treated amiss who spit nothing up, unless they void much Urine. Therefore when you see the propensity of Nature, you may come safely to Diureticks, to Maidenhair, Parsley, Fennil, to the cold Seeds where the Fever is urgent. ¶ Hippocrates, 2. de morb. makes three differences of a Pleurisy, according to the diversity whereof the Cure is to be varied. Concerning the first kind he writes thus (lib. 1. v. 233.) But often, if it be turned to the inferior parts, it distributes a pain through the Veins to the Bladder, and the Patient makes a great deal of Bloody Urine. In this place he sets forth, in what Pleurisy the Morbifick Matter is not expelled by Spitting, as is usual, but by Urine, a sign whereof is, a pain extending itself by the Groins to the Bladder, and the Patients making a Bloody Urine, understanding that which is tinged with a deep red, which looks of a Bloody colour. Seeing therefore this sort of Pleurisy has its Crisis by Urine not by Spitting, he therefore advises the Cure to be performed by those things which provoke Urine, for which purpose he gives *Oxymel* diluted with a good deal of Water; namely *Oxymel* is Diuretick, and by the coldness of the Water whereby it is diluted, 'tis very fit to temper Choler.

XXVIII. In the Pleurisy and Peripneumony, Nature which is the Curer of Diseases, does sometimes purge out by Urine the Morbous purulent Matter contained in the Cavity of the Breast, as Galen witnesseth, 6. de loc. 4. Therefore her Motion is diligently to be observed, lest it be inverted by her Servant the Physician: So that if it happen that Nature endeavours an Excretion by Urine, we must make use of Diureticks, as *Heurnius* persuades us, cap. 3. de morb. pectoral.

XXIX. Hippocrates, 4. acut. gave to a Pleuritical Person in the beginning *Oxymel* with *Panax*

(or All-heal) boil'd in it and strained, as also to the Hepatick and such as were pained about the Midriff; viz. to such as had Phlegmons or other collections of Humours in the Liver or Midriff: namely to digest powerfully, and to move Sweat or Urine, or both. This way of curing Pleuritical Persons by violently discussing Portions is not very much in use with our Physicians, who after Bleeding, Anointings, and Pectorals, pass to no other Remedy. Yet I know one, to whom some ordinary Fellow gave something of this kind in Drink, who by having a plentiful Sweat raised was presently relieved, his Breast loosened, and he spit easily, when it was now the seventh day of the Disease and he had begun to Expectorate nothing, and was in danger to be strangled almost through difficulty of breathing. Ignorant Fellows also who empirically undertake the Cure of some Diseases, cure Pleurifies often by Sweating Medicines with good success. ¶ A Boy of twelve years of Age was ill of a Pleurisy of his right Side; he was bled five times, and other things were prescribed: On the seventh there was given him half a drachm of Chimney Soot in *Cardus* Water: Within two hours after taking this Medicine, all the symptoms, which were grievous, remitted very much, and the Patient was much better, and afterwards recovered by degrees. ¶ I have seen many, and especially Women, who for want of fitting Remedies were brought to extremity almost by a Pleurisy, cured by taking once or twice of *Quercetan's* Apple in twenty four hours, whereupon beyond expectation there follow'd either a plentiful Sweating, or liberal Expectoration. Indeed I could name several to whom, being almost desperate, I have prescribed this Medicine, and I never saw any event of it but good. ¶ An obstruction of the Vessels by viscid Phlegm, or Blood coagulated in them, shall be cured by using inwardly and outwardly such Medicines as dissolve the offending Humour and make it fluxile again. Amongst Internals Aromatick salts are the most profitable which are prepared of divers parts of Animals, as all and every of them being endued with a notable vertue to dissolve all coagulated and congealed things, and to reduce them to their former fluidity, and likewise to provoke Sweat, which being gently promoted withal, a resolution of the coagulated Humours is more easily, quickly, and happily obtained. Hence it is, that often upon the seasonable giving of one *Sudorifick* prepared of the foresaid volatil salts or the like, the Pleurisy, which is an inflammation of the Side, hath been happily cured without the opening of a Vein. And hence it is that mixtures made of such things, and taken seasonably a spoonful at a time by short intervals, have soon, safely and pleasantly cured, both the Pleurisy and Peripneumony, and also the Inflammations of other parts: As for instance: Take of the Waters of Parsley, Hyssop, and Fennil, of each an ounce, of Treacle Water half an ounce, of the Spirit of Sal Armoniack half a drachm, of Laudanum Opiate four grains, of the Syrup of red Poppy an ounce, mix them. The Spirit of Sal Armoniack, the volatil salt of Hartshorn, or any other may be used, and according to the greater or less acrimony thereof, more or less of it may be added to the mixture, and a greater or less quantity of the mixture may be taken at each time, and the Body may be kept in a warm place to promote the Medicin on every hand, and sometimes to facilitate Sweating, though it is not needful to provoke Sweat, seeing that does no good, but as the volatil and saline vertue of the Medicin penetrates then the easilier and quicker to the part affected and obstructed. To a Volatil salt may and ought to be referred Crabs Eyes, the Jaws of a Pike, Hartshorn, &c. seeing they abound therewith. In this case also all Metallick and Mineral

Vallef. 4. de ac. p. 250.

Lazar. Ric. cent. 2. obs. 79.

Idem, cent. 4. obs. 83.

Epiph. Ferdinand. hist. 32.

Rhod. cent. 2. obs. 13.

Saxon.

Prosp. Martian. comm. in v. 206. l. 2. de morb. sect. 2.

Saxonia.

Heurn. Rhen. delat.

Sul-

Sulphurs, but such as are fixt, are profitable: wherefore hither is referred also *Antimonium Diaphoreticum* brought to some fixtness, though these things are good in this case on many accounts. Nor are only the Volatil salts of Animals profitable here, but all which are derived from the various parts of Plants called Scorbutical and Acrimonious, and emulate the virtues of the same, such as the Juices of Hedge-Mustard, Scurvygrass, both Garden and Water Cresses, &c. the Waters called Theriacal, if so be they have a vertue to loosen and dissolve coagulated Phlegm or con- creted Blood. Amongst External things these are good, *Unguentum Martiatum*, the compound Ointment of Marshmallows, &c. the Oils of White Lillies, Chamomel, Bricks, &c. which may be fitly mixt together and anointed on the outside of the affected part, premising or adding sometimes the rectified Spirit of Wine, as well the simple as the compound Aromatick. In this case also there may be applied outwardly Cataplasms, but rather such as are called Dissolvents, than Emollients and Ripeners; such namely as may incide and loosen the Coagulated Humour, and are prepared of Acrimonious and Aromatick Plants: As for example: Take of Onions roasted under the Ashes and bruised two ounces, the Leaves of Hedge-Mustard, Chervil, Garden Cresses, Elder, of each an handful and half, of the Flower of Beans and Lupines, of each an ounce, one Swallows Nest, of Album Græcum an ounce, boil them according to art in Butter-Milk to the consistence of a Cataplasma: This is to be applied indifferent warm, by the help whereof Internal Obstructions also may be opened. Note, that it must be renewed presently as soon as it begins to be dry.

XXX. That the Fluxed Matter may be digested, and yet incrassated, nothing is better than the Flower of red Poppy; which though some use indifferently, thinking it to be profitable in a Pleurisy from its whole substance, yet is it an hurtful-Medicin save in this case. It digests indeed moderately, but it has a vertue to incrassate, and therefore is good when the Fluxed-Matter is little, and only when the flowing Matter is thin; but if this hot and thin Matter be flown already for the greatest part, Incrassaters are to be let alone. ¶ Let the Flowers of red Poppy, of Blue Bottles, Burnet, Stags Pizle, the Powder of a Bores Tooth be given at the beginning of the Disease, not when it is come to Expectoration, for they straiten the Vessels through which the Blood flows to the part affected, and so does Coral.

XXXI. When in the year 1666. I passed through the Dales of the County of Newenburgh, to bid farewell to the Inhabitants amongst whom I had practised Physick, being about to return into my own Countrey, it happened that my dear Wife and Companion N. Joanna Spanheim being three Months gone with Child, falling from her Horse a mile or two from the City upon the Plain, hit her left Side against the Ground, wherein there began presently a great Pain with a Cough and difficulty of breathing, to all which a little while after was added a Fever. Notwithstanding we must need go forward to the City, where presently about the time of going to Bed we met happily with a Surgeon, whom I got to let her Blood on the same side her bruise was on. The next Morning, premising a Clyster, I gave her a draught of the Vulnerary Decoction, by the vertue whereof after a few hours some clods of Blood as big as an Hens Egg were expelled, and there forthwith followed health what was very much desired, even upon this account, that all things were prepared for our departure the next day, in which we were not prevented.

XXXII. *Antimonium Diaphoreticum* (see lib. 19. of Sudorifics) is a great Arcanum, and

greatly commended in the Pleurisy, whether true or spurious. In the former it notably disscusseth the collected Humours, absorbs the Acor, asswageth Pains, promotes Expectoration, and so satisfies all indications, especially if at first by a concise and true method of Cure Volatils were given, and this Medicin be afterwards joined with others, as Boars Tooth prepared Philosophically, (it is first boi'd for some days in simple Water or in a Copper Vesica, and then it is put in an hot Furnace, where its being chapt shews it to be well prepared) Crabs Eyes, and Opium it self, with which though it be given alone, it is a most sufficient Remedy. In the spurious or windy Pleurisy, how much *Antimonium Diaphoreticum* will do, those know, to whom its notable carminative vertue is manifest; for it is good outwardly, being mixt with disscussing Plasters, where Flatus insinuate themselves betwixt the Muscles; and also inwardly in Flatulent Tumours, especially in Children, for whose Gripes it is also excellent.

XXXIII. The Pleurisy is to be conquer'd by Specificks: but how these perform their operation, all are not agreed. Helmont, seeing he makes the next cause of every Pleurisy to be Extravasated Blood, which is caused by its acidity, does suitably determine that its Remedy cures in as much as it averts the Archeus from the conception of accefcence: And therefore he thinks that the said appropriate Remedies are friendly to the Archeus, that they correct the immediate cause in the Archeus, take away acidity, and dispose the Blood to a Diaphoresis, and ease the Pain by extinguishing the Acidity. Also the ferment of the Acidity being taken away, they resolve as much as may be of the Extravasated Blood, and do seasonably cast up the remainder by Cough, not designing to bring it to Pus. Which is the cause also why the same Remedies are given in bruises from falls, in as much as they resolve the Blood, that is, they take away the Spine or Thorn, remove the Poison, and in that regard incarn the place. Now there is nothing that more easily corrects, takes away and disposes to a Diaphoresis that acidity which is hostile to the Blood and Veins, than Hydrotick or Diaphoretick Specificks: such as are Goats Blood, the Powder of Stags or Bulls Pizle, the Juice of wild Succory, Poppy Flowers, Boars Tooth, Horse-Dung, the Herb Daisy, &c.

XXXIV. The next cause of a Pleurisy is the Blood stoppt through its roapiness in the smaller Vessels and Interstices of the Pleura, or else extravasated: (and the same is the next cause of a Peripneumony also:) Hence arises a preservatory indication designed against the Lentor and Effervescence of the Blood, which prescribes such Remedies as consisting of a Volatil or Alkalizate salt, do destroy the combinations that the acid, fixed, or otherwise Morbifick salts have entred into with other thicker particles. For which purpose the Eyes or Claws of Crabs, Boars Tooth, Carps Stones, the Jaws of a Pike, the Bone of a Stags Heart, a Stags Pizle, Sal prunella, the salt of Coral, the salt of Urine, or of Hartshorn, the Powder of dried Goats Blood, the infusion of Horse-Dung, the Spirit of Hartshorn, of Sal Armoniack, the Spirit of Tartar, mixtura simplex, bezoardicum minerale, *Antimonium Diaphoreticum*, the Flowers of Sal Armoniack are very famous Remedies in the Pleurisy.

XXXV. In March 1643. I begun to have a grievous pain in the mornings that seized upon my left Side and Breast-Bone, whence I had a great difficulty of breathing. I presently endeavour'd to disscuss it with hot Fomentations, though a Fever began to appear, which yet was little enough: after the Fomentation the pain was worse, therefore I let Blood out of the Arm of the same Side to ten ounces, which was very hot: Two hours after

G. Wolff.
Wedel. mif.
corat. anni
1672. obli.
72.

Frid. Hofm.
m. m. l. i.
c. 11. & 14

Willis.

Fr. Sylv. l. i.
pract. c. 40.

Saxonia.

Heura. Ron-
delet.

after Bleeding I took a Clyster, having taken some Gruel an hour before. After a second Mess of Gruel I repeated Bleeding to twelve ounces: for though the pain seemed to arise principally from Wind, yet I was afraid the greatneſs of the pain might draw a fluxion upon the part, which in two years before had been twice afflicted with a true Pleurisy. By these things the pain was somewhat abated; but persevering the following day, I took ano her Clyster of the Emollient Decoction, of *Diaphanicon* an ounce, *Aqua benedicta* four ounces, which gave me several Stools and one Vomit, and whilst I vomited the Wind contained in my Breast was suddenly scattered, so that I was quite freed from the pain of my Side and *Sternum*, and had need of no other Remedy.

River. cent.
3. obl. 3.

XXXVI. Boars Tooth, the Shavings of Ivory, the Jaw of a Pike, red Poppies and the like are so far from promising any help in a Pleurisy (which some call a Spurious or bastard one) that they seem to threaten the Disease it self, and to retain in the Breast that tough and clammy Matter with very great detriment and fear of suffocation. Therefore I wonder that Antipleuritic Pouders of the aforesaid things only, should be carried about and given indifferently in every Pleurisy. I have learn'd from Art it self that the Patients receive more hurt than benefit from these Pouders, if the *fumes* of the Disease be Phlegm.

H. Grube de
simpl. cogn.
p. 34.

XXXVII. Common Practitioners are wont to use Lambitives in the beginning of Pleurisies, which have a faculty to incrassate the Humour, that they may hinder the Fluxion to the part affected. These seem to me to offend in a double respect: first, because when they are called to Pleuritical Patients, the Fluxion is already made for the greatest part; so that to incrassate that which is made, is nothing else but to hinder spitting or digestion. Secondly, There are very often Bastard Pleurisies, when thick Humours flow down either from the Head, or from the whole Body, in which case Incrassaters are Poisons. Therefore the Matter of the Pleurisy, and the plenty of the Matter already flown are always to be observed before Incrassaters be given: And if that which flows be hot and thin, and be collected in a little quantity, 'tis convenient to prepare a Lambitive that has a vertue to hinder a new defluxion, and also to digest that which is already flown.

Saxonia.

XXXVIII. In a Bilious Pleurisy, which has a notable burning and violent heat joined with it, we must abstain from Honey and Sugar and all things which are apt to be turned into Choler and to increase the heat, and we must come to cooling Potions and Suppings, which yet must be loosening, not binding.

Petr. Sal.
comment.
in text. 91.
l. 2. de morb.

XXXIX. 'Tis some question whether Acid Potions be good: both because Vinegar is offensive to the Membranes; and also because if the Potions be pretty acid, where the Spittle is not easily brought up, there proceeds greater harm from the Viscosity which follows the not coughing up, than help from the irritation that accrews from the twitching of the Medicin: for upon this account did *Hippocrates* (3. acut.) condemn Oxymel for its acrimony. But perhaps, in *lib. de affection.* by the more Acid Potions he did not understand such as are very sharp, but those which being simply acid, may in respect of Muls and sweet Potions, be called more acid, which will be chiefly good in a Pleurisy depending on a Phlegmatick Matter, because in it the Phlegmatick Humour sticking to the Membrane like a Plaster, suffers not the Membrane to be twitched by Acid Potions.

Idem, com.
in l. 2. r. 27.
de morb.

XL. Some Practitioners in great want of sleep dare give *Narcotics*, as the Syrup of Poppy, *Philonium Romanum*, *Laudanum Opiatum*: Which yet in this Disease are pernicious, for they retain the Spittle and straiten the Breast, whence there often

follows hasty destruction. Yet this is to be understood of a full Dose of *Narcotics*; for if they be given in a small quantity they may do good, in a violent pain, a troublesome cough without getting any thing up, arising from a very thin Humour, and in continual watchings. In which cases I have often given one grain of *Laudanum Opiatum* with good success, and sometimes have repeated it several times. But its use is chiefly in the beginning of the Disease, for then the Humour that is a flowing into the part may be restrained, and an increase of the Disease hindered. ¶ The use of those Medicines which are made of *Opium*, *Hennbane*, and *Mandrake*, cures not the painful affection of the Pleurisy, but takes away the sense.

River.

¶ Being called on the seventh day to a Pleuritical Person that greatly wanted sleep, I gave him after Supper a little *Laudanum* with his pectoral decoction, and a little *Confectio Alkermes*; he rested pretty well that night, whereby Nature recovered new strength, &c. and he recovered about the seventeenth day. ¶ We must note that things taken inwardly are more available; for things applied outwardly hardly penetrate to the pained part, are very slow of operation, and in their passage to the Internal parts do incrassate the Humours, and upon this account do increase the pain and its cause.

Galen. 1.
acut. 33.

¶ In a dry Pleurisy and a Bilious Patient, *Laudanum* being twice given after Universals, cured the Disease by easing the pain, though the pain was very violent.

Fabr. Hild.
cent. 5. obl.
37.

XLI. That ancient Physician *Rhazes* has admonished us to take heed of hot things; for, says he, many increases happen to this Distemper by the mistake of unskilful Physicians: as when upon conjecture, that the Membrane that cloaths the Ribs is stuff'd with thick *Flatus*, they unseasonably give *Diamschu* or some Medicin that is like it in discussing and inciding, for by this unseasonable Curation they kill their Patients. ¶ I remember a Woman that began to be seized upon by a Pleurisy, to whom her Physician gave Treacle, with other heating things, and she was order'd to sweat upon the taking thereof; whereupon all things growing worse, she died at last of a *Peripneumony*.

Zacut. prax.
hist. l. 2. c. 3.

Th. de
Mayerne,
tract. inf. de
Laudano.

XLII. The difficulty about the use of Repriments at the beginning, is very great: For *Mesue* uses at the beginning a repressing Medicin, of *Roses*, *Balaustins*, &c. and he seems to have reason on his side; because every beginning Inflammation is treated with Revellents and Repriments; And *Galen*, 11. *Meth.* 17. having spoken before of the use of Astringents in an inflammation of the Liver, adds, In Inflammations of the Breast Astringents are not so convenient; he says not, they are altogether inconvenient, but, not so convenient. *Hippocrates* himself, 2. acut. 4. uses Barley and Bran in *Posea* (or Vinegar and Water:) Now Vinegar represses. Yet Repriments seem altogether suspected: first, In regard that Astringents harden the Matter that is already flown; Secondly, They repel the same into the Lungs: Now a *Peripneumony* is worse than a Pleurisy: Therefore *Galen* in the fore-cited place gives great Caution that such Inflammations of the *Thorax* be not repelled to the Lungs. And indeed such suspicions are of so great moment, that I durst never use Astringents in a Pleurisy. To *Mesue* we must say, what even himself confesses, that these Repriments are then only convenient, when the Matter is as yet not flown at all, when it is hot, thin and little: But if it be not as yet flown, how is it a Pleurisy? It is a trifling supposition: for it is not a Pleurisy, if some part, yea sometimes and generally the greatest part be not already flown. Therefore *Hippocrates* in the cited place uses not repressing Fomentations, wherein he is wrongly condemned by *Trallian*; but he uses that Fomentation to attenuate and incide that thick Matter which makes a Bastard Pleurisy.

Heurnings

Bruno Seid.
de morb.
incut. p. 50.

XLIII. Saxonia.

XLIII. That we may rightly understand the ver-
 tue of Fomentations, we ought to note that there
 are three principal Remedies of a Pleurisy, Fo-
 mentation, Venesection, and Purging; the first
 whereof fights with the Conjoint Cause, and withall
 sometimes stops the Antecedent; and Venesection
 and Purging take away either the Antecedent Cause
 or the Conjoint; so that in this respect Fomentation
 being conveniently applied, sometimes excels Ve-
 nesection, because Venesection is not convenient
 in every Pleurisy, but Fomentation is: but not
 every Fomentation for every Pleurisy, but some-
 times one, sometimes another according to the con-
 dition of the Matter, the Constitution of the Pa-
 tient, and the history of the Disease. For when
 the Matter is Bilious, warm Water is used; when
 it is thick and stubborn, a mixt Fomentation,
 which incides, attenuates and digests: When the
 Catarrh is thin, a dry Fomentation, either biting,
 or not. But if, says Hippocrates, the pain cease
 not upon Fomentation, (through the afflux of new
 Matter, from an Orgasm, Attraction, or Exclufion,
 namely, when one part unloads it self upon
 another) we ought not to spend much time in fo-
 menting, but we must make an end of heating, for
 this drieth the Lungs (by heating and exhauiting,
 because whilst that which is subtil is resolved, the
 remainder is curdled the more and made thicker)
 and causeth Suppuration. You will object, *aph. 2.*
52. If you do all things according to Reason and
 yet without success, you must not change whilst
 that remains which was seen at the beginning: but
 here it remains, for the Physician ought still to en-
 deavour to remove the pain and to restore the part.
 I answer, That the said Aphorism is to be under-
 stood, if so be there be no danger of a greater
 mischief. Hence appears the error of the Mo-
 derns, who not only prescribe hot Baths, but also
 apply Plasters that are notably heating. Therefore
 when you have made provision for the whole, ply
 your Fomentations; but if the Malady abate not,
 return to Venesection. Now there are two sorts of
 Fomentations, *Tryers*, and *Mitigators* of the pain.
Mitigators have no place in a true Pleurisy, unless
 the whole Body be first evacuated, for otherwise
 the impetus of the Humours will increase. Where-
 fore we shall then chiefly use Fomentations in the
 beginning of a pain in the Side, when we think
 that the Matter that is flown thenceinto may be ex-
 hausted thence, as not running so much about by its
 plenty: Wherefore observe whether the Patient
 have been accustomed to a spare Diet, or whether
 some great Evacuation have preceded. But where
 there is an Apyrexia, there will be no danger from
 the Fomentation, if the Body be not too full of
 Humours, or oppressed with their quality. But
 when we try the Malady by Fomentation, we do it
 before Evacuation, that it may appear whether
 plenty of Matter be in fault: If the pain be in-
 creased by Fomentation, presently open a Vein.
 But Mitigators must be used after Bleeding: Let
 these be such as may mollify and rarefy the part,
 and may resolve the Blood, if it be little, into the
 habit. Now there are divers manners of Fomenta-
 tions, for they are made with a Bladder, Sponge,
 or Cataplasim. On the first day we anoint the Side
 with the Oil of Violets; on the second with the
 Oil of Almonds; on the third with the Oil of Cha-
 momel; on the fourth we use a Cataplasim or
 Poultices, of Linseed, Fenugreek Seed, Mallow
 Seed, of the Roots of Marshmallows and of Cha-
 momel Flowers: on the fifth, if it tend to Suppu-
 ration, we add Suets or Greases: But if the Dis-
 ease be moist, and there be much cough'd up deep
 at the beginning, Bags of Millet, Bran, Salt and
 Cummin will be better: But if the Patient Ex-
 pectorate, we must never depart from moist Fo-
 mentations. And always observe this caution, that
 whilst 'tis doubtful whether it be only Wind, or a

true Pleurisy, you must presently come to the Oils
 of Chamomel and Rue, with the Seeds of Cummin
 and Dill, which yet we use rightly in the progress
 of the Disease also. If the pain be eased by
 Fomentations, consider exactly whether that come
 to pass upon account of the Fomentation: because
 upon the first Blandiment of the Fomentation the
 pain in a Phlegmon often grows milder, because
 the extended part is loosened, but by and by it
 returns fiercer when new Matter is sent into the
 Phlegmon. It sometimes happens that when the
 Matter is deeper imprinted, the pain is not miti-
 gated by Venesection, because the Membrane that
 cloaths the Ribs being thicker than usual, grants no
 exit to the Matter that has insinuated it self into it:
 in this case Fomentation is of principal use: And
 in all Fomentations take heed that by their weight
 they add not pain to pain. If you find that Fo-
 mentations do no good, use them not above two
 days, lest the thin Humour be exhausted out of the
 part affected. Again, If the Patient burn with an
Ætus from Cholerick Blood, see that in the be-
 ginning of the Disease you anoint with the Oil of
 Violets or with *Unguentum Resumptivum*; for in
 an Inflammation of the Breast Coolers and Astrin-
 gents are to be applied sparingly. For 'tis suffi-
 cient that by these things which are endued with a
 gentle astriction the Breast be strengthened, that the
 inflamed part, which is hot and pained, may not
 by attraction so easily receive the Matter: Now it
 does so when we use Looseners: Yet if all way be
 intercepted for the flowing Matter, it is driven
 into a certain Orgasm, and provokes a Peripneu-
 mony and Phthisis. If it be a Bastard Pleurisy,
 as if the Malady be seated in the Muscles, make a
 Plaster of Pitch and the Oil of Dill: and if the
 Matter be cold add two drachms of Sulphur. *Heuritis.*
 ¶ Hot Fomentations even in cold and windy pas-
 sions seem at the first to hurt, because the *Flatus*
 being attenuated they distend more, and the pain
 increases: but by continuance they cure the pain
 which at first they increased. ¶ Heating Reme-
 dies to be applied to the pained side are some of
 them simply Anodyne, others both Anodyne and
 Maturating: Anodynes may be administered in the
 beginning to assuage pain, and somewhat to dis-
 cuss the Matter, because seeing they are endued
 with no great heat, and rather loosen than obstruct,
 they may rather lenify than attract: Hippocrates
 commends these Heaters both in *lib. acut.* and in
2. de morb. But Concocting and Maturating Me-
 dicins, seeing they are apt not to loosen but ob-
 struct, not to evaporate the inward heat, but to
 increase and cherish it, are not convenient in the
 beginning, because then they increase the Fluxion
 and Inflammation: These are condemned.

XLIV. Many add Wax to Liniments, which yet
 is not convenient, because it obstructs the Pores;
 as neither are Mucilages which are Emplastick, be-
 cause they cool and bind.

XLV. Amongst the Remedies that use at one
 and the same time to move Spitting, Urine, and
 Sweat in Pleuritical Persons, is a *Bath of Sweet*
Water, which Hippocrates mentions *3. acut. 58.* by
 whose Authority both the *Arabians*, and *Latins*
 and *Greeks* are induced to commend it. But it
 seems to be suspected by me; for if it be made
 use of when the pain is urgent, when Spitting pro-
 ceeds not well, (which he seems to desire it should
 be, when he writes, that it eases pain and promotes
 spitting) at this time the Pleurisy is in its in-
 crease, or at least in the beginning of the state, at
 which time it will carry the Humours that are colli-
 quated in all the parts of the Body, to the part
 affected. Therefore *Galen*, *12. Meth. 13.* suspects
 it in an Inflammation of the parts of the Breast,
 lest the inflamed part being heated and relaxed by
 it, should receive the Fluxion. And if any say
 that it is to be used in the time of Concoction, and

(* B b b b)

Heuritis.

Valles. de
vict. Acut.
p. 52.

Salvus Coris
in text. lib.
de aff. lib. 2.
87. de morb.

River. en-
chir. med.
pract.

only

Saxonia.

only in the declination, it will indeed be of no use: for in the declination the pain ceaseth, and the Spittle is already concocted and in a great measure brought forth: Therefore in a word, I do not approve of a Bath.

XLVI. Though the Body be dissolved, and all the faculties dejected in immoderate want of sleep; yet according to Hippocrates's Precept, 3. de morb. t. 56. sleep is greatly to be shunn'd, seeing by it, especially if long, most of all that which comes in the beginning of the Invasions, the Internal Inflammations of the Viscera are increased, because the Blood retires, then to the inner parts, as Hippocrates teaches, 6. Epid. sect. 5. t. 30. whence Persons become hotter when they are asleep, both the native and extraneous heat, retiring to the inwards. Add hereto, that seeing the Animal faculty is then made drowsy, the Pleurisy can neither be purged by spitting, nor the issuing Matter be hawked up, but remaining within, it increases the difficulty of breathing, obstructing the passages of the Breast by thick and tough Matter, which mischiefs are only declined by coughing, which we make use of only when we are awake. But Hippocrates says in the cited place, that sleep is very much to be kept off, but not altogether, because of the necessity of it, and the detriments of too great watchings.

XLVII. There oft happens a certain middle Disease, compounded of a Pleurisy and Peripneumony, yet more dangerous than a Pleurisy, in such whose Lungs being ill affected stick to their Ribs: For a Fluxion being poured into their Side, it is apt to burst in Lungs that are moribund and weak and cleaving to the Side. This is distinguished from a Pleurisy, because though it have a pain in the Side accompanying it, yet that pain is not proportionable to the Fever; and besides there is felt a grievous pain extending it self even to the middle of the Breast. Moreover upon once, twice, or thrice Bleeding the pain of the Side is allayed, but the Fever continues, as likewise doth the difficulty of breathing, and coughing up yellow or red Spittle.

Enchir. med. pract.

XLVIII. J. Prevotius observed that a Pleurisy of the left Side was for the most part deposited by Urine: And therefore he gave the milder Diureticks in this case with good success; amongst which *Diacuminum* was a familiar Remedy with him: Daphoricks never answer'd his desire: And when *Rulandus* extols these so greatly, without doubt he has an Eye to the Story of *Anaxion*, Epid. 3. Agr. 8.

Rhod. cent. 2. obs. 13.

XLIX. That is worth observation which *Aretaeus* hath noted: If, says he, the Pleuritical be out of danger, yet still cough a little, and an heat now and then return and molest them; we must hasten to make a thorough discussion; for what is left, either causes a Relapse, or turns to Suppuration.

L. Use great caution when the Phthisical are troubled with a pain in their Side: for sometimes stubborn *Flatus* get into their Lungs, seeing their Lungs that float with continual moisture, stick to the sides of the *Thorax*, as it they were preternaturally glued to them. Apply only Fomentations and *Sacculi* or Bags, Cupping-Glasses, and then a Plaster of Melilot. See Sect. XVII.

Hennius.

LI. The Liver in some Bodies is naturally knit to some of the short Ribs by Fibres; and therefore when the Liver is diseased in these Persons, there is a representation of a Pleurisy. In others there is collected a certain thick and viscid Matter in the Membranes of the Breast, also all the *Thorax* over, whence there is a great pain, a difficulty of Breathing and a counterfeit Pleurisy; for there is neither a pricking pain, nor is there a Fever kindled: as neither are there, if there be *Flatus* impacted in the Membranes, or in the Intercostal Muscles.

Sometimes likewise the Muscles are inflamed, but then here is another manner of pulse, namely a soft one; the pain is heavy, not pricking; and all things generally are lighter. The Membranes also that part the *Thorax* (called *Mediastinum*) if they be inflamed are as dangerous to Life as a true Pleurisy. In like manner when the lower Ribs are inflamed, the Midriff, and from hence the Stomach are very dangerously affected.

Holler. l. 1. de m. interna.

LII. A Soldier complains of a troublesome pricking in his Side: A Barber being called, supposing it to be the Colick, gives him a Purge, which wrought so by Stool for two days, that at length he voided a great deal of Blood. When he was almost spent, he consults a Physician, who considering all things diligently, fees and tells him that he's sick of a Pleurisy: He was presently let Blood, then he spit forth a laudable Pus, by which being relieved he recovered.

Thom. Barthol. cent. 3. obs. 74.

LIII. A Girl of eight years old began to be ill of a Cough and Fever, to which succeeded a pain in her Side, so that she was thought to be Pleuritical. On the fifth day of her illness she voided four Worms upon taking a Clyster: On the days following she voided several, both by the help of such things as she took to kill them, and also by Purgers. Whence it appears that Vapours raised from a putrid Matter (of which the Worms are generated) produce the pains of the Side, and a Cough and other symptoms resembling a Pleurisy.

River. cent. 1. obs. 75.

I had a Girl to my Patient who had all the symptoms that are usual in a Pleurisy; there was a pricking pain in the right side of her Breast, a little dry Cough that was raised on every small occasion, her Pulse felt hard, and was not altogether unlike a Saw and Recurring, she breathed short, and had a continual Fever. Observing that sometimes her Body was cold all over, and sometimes hot, with one or other Cheek red, upon giving her a Medicine to kill and bring forth the Worms, she presently voided many and recovered. See *Quercetan pharm. dogmat. rest. cap. 7.*

Gabricin. c. 13. l. de lumbrie.

LIV. Mr. N.'s Maid was troubled with a pricking pain in her Side, with a Cough and white Spittle, which yet twice or thrice appear'd Bloody. She could lie better on the pained Side, which was the right. She had no Fever, which was a sign 'twas no true Pleurisy, seeing such Inflammation cannot be without an Acute Fever. On the seventh day of her illness, seeing the pain had never intermitted, she spit Blood plentifully for some hours, whereupon there follow'd a Flux of her Terms, and thereupon a perfect solution of the Disease. I thought the cause of this Distemper to be an Acrimonious Humour translated into her Side by the Veins, which caused the pain without inflammation: Which Serous Humour being exagitated, opened some little Veins on the seventh day, whence happened her spitting of Blood: but Nature conquering, and sending off that Serous Matter to the Veins, there was made a solution of the Disease.

Laz. Riv. cent. 1. obs. 73.

LV. The Wife of Mr. N. was taken with a Pleurisy on her right Side, and that very grievous: About the later end of the seventh day and beginning of the eighth she was taken suddenly with so great a Palpitation, that her ordinary Physician thought it to be the last strugglings of Nature, and foretold that death would speedily follow. I was of opinion that that Palpitation proceeded from some putrid Matter evaporating, contained in the lower Belly: The event shew'd it to be so; for after two hours she had two very stinking Stools, upon which she was freed from the Palpitation. Her case was suspected to be full of danger, because the Disease had not been lessened in seven days time by any Remedies, nor so much as by repeated Bleeding: And now though the symptoms seemed to abate, there appeared a *Parotia* on the eleventh day, which the next day disappear'd, and she

Lazar. Riv.
cent. 1.
obl. 72.

she died on the thirteenth. Whence it appeared to have been a Malignant Pleurisy, or rather a Malignant Fever accompanied with a Pleurisy.

LVI. The Pleura is not only subject to Inflammation, which a Pleurisy, Empyema, and Vomica (or Imposthume) follow, but also to a certain pain which a salt Humour causeth. This may be distinguished from a Pleurisy, because though here be a dry Cough, yet there is no Fever, and also a free Respiration. I use to cure it by Bleeding and Sweating, if there be fear of a Pleurisy, I apply this Plaster outwardly: Take of the Marrow in a Cows Leg-Bone, and of Ducks Grease, of each three ounces, of the Mucilage of Marshmallows, Linseed, Fenugreek Seed, of each an ounce, of Frankincense, Mastick, of each half a drachm, ol. nucist. by expression two drachms, of yellow Wax as much as is sufficient, mix them.

Barbette
Anat. Pract.
p. m. 130.

LVII. Fernellius, Pathol. l. 5. c. 10. notes, that when a pain succeeds an Inflammation of the Lungs, an Ulcer, or Abscess of the Side, the pain being inward, firm, and permanent, it signifies that the affected Lungs do now adhere to the Pleura by the intervention of Phlegm or some clammy Sanies that flows out of the Diseased Lungs. In that case there is place for no other Remedies but those that are able to loose that Cohesion, and melt the clamminess of the Sanies or Phlegm, as Fomentations of warm Water, Milk, &c. contained in Bladders: Drying hot Fomentations do harm by increasing the clamminess of the Sanies and Phlegm.

LVIII. A young Man having been run in at the Back as far as his Lungs, was taken with an Acute Fever, with a pricking pain, and difficulty of breathing, so that he was esteemed Pleuritical: The next day the Membranes of his Lungs being inflamed, he complained of a pain reaching to the Orifice of the Wound behind. Hence J. D. Sala taking it for something else than a Pleurisy felt upon the part where the Wound had been made, and consulting with his Reason, pronounced the Fever to arise from a Vomica bred in the Lungs through a collection of Pus: nor did he guess amiss, for by the use of fitting Remedies all the Pus was brought up by coughing, and the Patient recovered very well.

Barth. cent.
3. hist. 95.

Medicins especially made use of by eminent Physicians.

1. A drachm of the Powder of dried Burdock Roots taken in the Morning in warm Water, and sweating upon it, presently eases the pain and cures the Patient.

Al. Bened.

2. An infusion of Horse-Dung in thin White Wine for a Man, and of Mares Dung for a Woman, being drunk betimes in the morning, and the Patient composing himself to sleep after it, does excellently disperse the Tumour in a Pleurisy, by insensible transpiration. For there is a great discurssive vertue in Horse-Dung because of its sulphur, and the fixt and volatil salt that are found plentifully in it. ¶ The Blood drawn out of a Goats Stones is a most certain Remedy for a Bastard Pleurisy, both anointed outwardly, and taken to a drachm inwardly.

P. Joh. Fab.

3. Take of *Sai Prunella* two drachms, the Flowers of red Poppy powdered, red Coral, of each a drachm, of Sugar-Candy half an ounce: Make a Powder: The Dose is two drachms, drinking after it some red Poppy or Carduus Water. It is an excellent Remedy.

Fr. Ofw. Gr.

4. It is an excellent Remedy, to give on the second day a drachm of the Powder of the Seeds of Ladies Thistle.

Fr. Joel.

5. This is a very profitable Ointment for asswaging the pain: Take of the Ointment of Marshmallows an ounce, the Oil of Sweet Almonds half

an ounce: Anoint the pained part herewith warm, and while it is moist, sprinkle thereon some fine Powder of Chamomel Flowers, and lay over all a warm Colewort Leaf anointed with Butter or Hogs Grease, tying it on with bandage.

Z. Lusit.

6. I have seen many Pleuritical Persons cured with Pigeons Dung, taken to half a drachm, in some convenient Liquor.

Dom. Pand.
rol.

7. For mitigating the pain and procuring sweat this is admirable: Take of the Water of Chamomel Flowers four ounces, of Sugar two drachms; take this Draught for two or three mornings hot, and sleep upon it lying warm.

Eust. Rhod.

Prurigo, Scurf or Mange.

The Contents.

A Man cured by a Decoction of Snakes. I.

Another cured by a Bath of Urine. II.

I. A Young Man being troubled with a Scurf, could get quit of it by no Remedies: At length he was quite cured by a Decoction of Snakes, six ounces whereof he took at night three hours after Supper with a little Sugar, for forty days together. For Snakes (*Aristot.* 8. *de gen. anim.* cap. 17. calls them Vipers) dry, absterge, cleanse the Skin, thrust the superfluous Humour to the External parts, and bridle the naughty quality thereof.

Zacut. prax.
adm. obl. 2.
lib. 1.

II. Of what efficacy a Bath of Urine is for curing Cutaneous Diseases, *Galen*, *Actium*, &c. shew, for it absterges very much. A Melancholick young Man was a long time troubled with a Scurf or Mange, for thin and branny Scales shell'd off from all his Body, leaving many Ulcers behind, flowing with virulent Sanies: When all other things would do no good, he was quite recovered by using only a Bath of Urine.

Idem, obl. 34

Prægnantium affectus, or the Diseases of Women with Child.

The Contents.

It is a difficult thing to Physick Women with Child. I.

Let Physicians undertake the cure of them. II.

Whether Women with Child may be bled in the Foot. III.

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Whether Remedy is safest, Bleeding or Purging. V.

Whether Purging be convenient. VI.

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Whether a Bath be profitable. XIII.

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It may be stay'd by Narcotics. XX.

It is to be sapt with caution. XXI.

An immoderate Flux of Blood is stanch'd by provoking the Birth. XXII.

The same stanch'd upon bringing forth a dead Fœtus. XXIII.

How and where we must use Astringents. XXIV.

I. **T**Here is a great difficulty in Women with Child in every respect; and I always use to say to my Scholars, There are two things in Physick which I am most troubled and solicitous about, wherein I am prest with the greatest difficulties, and almost falter and stumble, namely, when I Physick Women with Child, and Infants; for the Cure of Women with Child is doubtful, difficult, and full of anxiety. Wherefore I think that we should always walk with a Leaden Foot, and do all things with premeditation.

Epiph. Ferd.
hilt. 13.

II. Though most Physicians refuse the Care of Women with Child, yet they are not to be left destitute: yea, we may safely undertake their Cure, when they have a laudable Blood to nourish their Fœtus withal; but we may not hope so well in the Cacochemical, who are apt to miscarry upon taking of Physick.

J. Raym.
Forris, conf.
76. cent. 2.

III. Whether may Women with Child be let Blood in the Foot? This Question is founded in Acute Diseases, the Epilepsy, an Erysipelas of the Womb, great pains, burning Fevers, which depend on the Womb. Women according to Aristotle abound with Blood about their Womb. Therefore there is no doubt but that Blood is to be taken from a Woman with Child when she is ill of an Acute Disease, even though it injure and endanger the Fœtus, because it is better to study and provide for the health and safety of the Mother than of the Fœtus, seeing its Life depends on the Mothers: and Blood is to be let as often as the greatness of the Disease shall require it. But the Question consists in this, Whether Venesection in the Foot be convenient and safe? For if according to Hippocrates a Woman with Child miscarry upon Bleeding, much more when she is Bled in the Foot, because Food is thereby withdrawn from the Fœtus, according to Galen, in comment. For this kind of Remedy is designed for provoking the Terms, according to the same Galen, and to unload the Womb, and to revel from it whatsoever it contains that is troublesome and painful. 'Tis better therefore to draw as much Blood out of the Arm as is necessary, than out of the Foot, because through the Circulation all the Blood returns from the lower parts upwards to the Heart. And the Blood is contained in greater quantity above the Liver than below, by reason of the parts of the Breast, and of the Head which receives a great deal: Therefore Bleeding in the Arm may equally revel from the Womb, because the Liver makes the middle of the Body, according to Galen, and revulsion ought to be made to a contrary part. Besides, it empties the parts of the Breast and Head sooner and more commodiously. But if the first or second Venesection should be made in the Foot, while the Uterine Vessels are yet full, it would be tolerable; but it is not used but when the upper parts are already exhausted, and therefore the Blood that is contained about the Womb in the Hypogastrick Vessels, is revelled and withdrawn from the Fœtus: from whence an Abortion may follow, if it be defrauded of its nourishment. Moreover Venesection in the Foot is nearer to the Womb, than that in the Arm, and so is apter to cause Abortion: And Venesection in the Foot does draw by the Arteries the nearest way from the Womb, which that in the Arm does not do. Wherefore 'tis better in a Woman with Child to open a Vein in the Arm than in the Foot, unless the Physician intend to procure Abortion to preserve the Mother from imminent danger of

death. But if the Woman should be in the greatest danger of her Life, and without an intention of causing Abortion should need Bleeding in her Foot; her strength holding up, it were better to Bleed her therein from the sixth Month inclusively to the ninth, though the Fœtus be then bigger; because by the great providence of Nature Blood is contained (as in a Store-house) within the substance of the Fungous Womb, and in the Placenta that is now thick and large, enough for the nourishment of the Fœtus for some days: But in the other foregoing Months, when the Placenta is little and sticks not firmly to the sides of the Womb, that has not as yet acquired a thickness capacious enough, to suck up and contain the Blood, that is as yet fluid about the Womb in the Hypogastrick Vessels, by Bleeding in the Foot it may be recalled as in the Menstrual Purgation, and so be withdrawn from the Womb, and therefore an Abortion would follow.

Riolan. an-
thropogr. l.
6. in fine.

IV. The Diseases that seize upon Women not with Child, as Vomiting, want of Appetite and the like, in them need Purging rather than Bleeding; because they are caused by a Cacochymie abounding in the Stomach and the whole Body: But in Women with Child they need Bleeding more, because they are caused by the Blood retained from the very beginning of their being with Child. And Experience hath taught that the Vomiting which often afflicts Women with Child in the first Months, are aggravated by Purgations, but are much relieved by Bleeding, yea, are wholly removed, if it be repeated every Month till the symptom wear off.

River.

V. According to Hippocrates, aph. 1. sect. 4. one would think that we should reckon Purging to be safer than Bleeding; for he there permits Purging in a certain case and time; but on the contrary concerning Venesection he writes absolutely, aph. 10. that it causes Abortion. But Purgers do cause a great agitation, and generally have a quality that is injurious to the Body, and besides provoke the Terms, and cause Gripings: Whereas on the contrary Bleeding is administered with less perturbation of the Humours; nor does it hurt any otherwise but as it deprives the Fœtus of its aliment, which fear is vain if there be a Plethora. And it appears by Experience that Bleeding has better success than Purging, when there is present the same reason of Indicants and Permittents. Add, that many Acute Diseases spring from plenty of Blood, for which Bleeding is the properest Remedy.

VI. Hippocrates, aph. 1. sect. 4. hath defined the use of Purgation in Women with Child; Women with Child are to be Physick'd, if the Matter be Turgent, in the fourth Month, and till the seventh; but these later more sparingly: But we must have a care when the Fœtus is very young, or when it is full grown. Galen in comment. says, that Fœtus are like to the fruits of Trees; Now these when they are newly shaped or set, have but weak Stalks, and therefore they easily fall off when a violent Wind shakes them; but afterwards when they are grown somewhat bigger they are not so easily shaken off the Trees: and yet when they are come to their full growth and are ripe, they fall off of their own accord and without any extrinick violence. In like manner Women suffer Abortion in the first and last Months, because in those Months the Fœtus is not so firmly knit to the Womb. But in our times Purgers are administered almost in every Month of their being with Child, in Diseases which are produced by a predominance of Excrements and a Cacochymie, when the Matter is turgent, or concocted, as often as there impends greater danger on the part of the Cacochymie, than from the commotions raised by the Purge. Physicians have been made bolder herein upon the account of the gentle

River.

gentle and harmless Medicines that we use now adays, as Rhubarb, Myrobalans, *Cassia*, *Manna*, *Senna*, *Agarick*, and the like. Yet we must always have regard to *Hippocrates's* opinion, that Purgers may be given more safely in the middle Months, but are to be used more warily in the first and last.

¶ Being with Child hinders Purgation for fear of Abortion; and though even Acute Fevers be present, and the Matter be Turgent, yet the offending Humours may be corrected and evacuated by divers Remedies without strong Purgers. For such Medicines are common at this day, as prepare the Humours, and bring them to the ways of the Ducts, without making use of any violent Remedy. And we must know that in the Diseases of Women with Child there is sometimes a very great fermentation of the Blood, because of some Preternatural ferment raised in the mass of Blood, which Purging Medicines, as such, can no ways bridge; and moreover 'tis very doubtful as yet, whether that fermental Effluviu will follow the guidance of the Purgers. See *Zacut. M. P. H. l. 3. lib. 14. Fr. Hofm. m. m. p. 53. Schenkius obs. l. 4. p. 554.*

VII. *Cassia* is not to be given to Women with Child, as no more are most Diureticks, because through the nearness of the Womb with the Bladder, which they provoke to expulsion, they may do much harm: Besides, *Cassia* by its superfluous moisture relaxeth the Womb, and weakens the Coryledons; and 'tis also suspected for breeding Wind. *Zacutus* thinks that it may be so corrected by the addition of Spices and Carminatives, as to become harmless; but Experience witnesseth that it is not safe to use it.

VIII. And the Evacuation that is made by Clysters is altogether unsafe, because it may cause Abortion by compressing the Womb. When therefore there is need of them, and Women have been accustomed to this kind of Remedy, they ought to be made up in a less quantity, and to be made of those things which are endued with a vertue rather to mollify and loosen, than to purge strongly.

IX. The use of Pills ought always to be suspected, both because they disturb the Body more, and also because of the Aloes, which for its notable bitterness is offensive to the *Fetus*, and is believed to open the mouths of the Veins. But if its use seem necessary at any time in the more grievous Diseases of the Stomach, which are often wont to afflict Women with Child in their first months of being so, let it be well washed with Rose-Water, that its acrimony may be taken away; or let it be mixt with astringents and strengtheners, as Mastic and the like.

X. Diureticks, because they are apt to provoke the Terms also, ought to be suspected, and if the necessity of the Disease do sometimes require them, let the more gentle be chosen.

XI. The drinking of *Acidula* (or Mineral Waters) is to be denied, (*viz.* the Medicinal drinking, not the extraordinary, wherein a draught or two is granted for pleasure or to quench thirst) First, because by opening, inciding, attenuating, and absterging they provoke the Terms; whereby Aliment is withdrawn from the Womb: Secondly, because the Belly is thereby loosened; but things provoking to Stool are hurtful, *aph. 34. 5. and 27. 7.* Hereby the *Fetus* is deprived of Aliment, the bands whereby it is tied to the Womb are loosened, and the *Fetus* is offended by the frequent stretch of the Excrements as they pass by.

XII. Sudorifics, if they be of the milder sort, may be safely used, Experience teaching that they are beneficial to Women with Child that are infected with the Pox, or Plague, or the like Diseases: for when there are vicious Humours in the Body, if Nature be not infirm, such things help

more than they hurt, and Nature joins her self as a Companion with the Medicines against the Morbifick Causes, which being banished, the Spirits and Faculties are restored.

XIII. Concerning a Bath *Avicen* thus admonishes, *But if superfluities be multiplied in them, 'tis fitting they bathe often.* But indeed it is naught, unless towards the later end of the ninth month, for it dejects the Spirits, softens and loosens the bands that contain the *Fetus*, breeds Crudities, and which is worst, provokes the Terms, by unlocking the Vessels and fusing the Blood. But to sit in a Bath is profitable for those who are near their labour, for by it the Womb is dilated, the neighbouring parts are softened, and an easy passage is granted to the *Fetus*.

XIV. As often as a Woman with Child is struck with some violent affection of mind, a fright, anger, or sadness, whereby there is danger she should fall in Travail before her time; first a Vein must be opened in her Arm, especially if she be Plethorick, and a small quantity of Blood taken, that is, if her strength and Spirits permit; otherwise let her drink a Glass of Wine, &c. Secondly, Let the Spirits and Humours that are disturbed and tossed all the Body over, be allayed by Anodynes and Opiates administered prudently, sometimes Aromaticks, and sometimes Acidish Medicines being added according to the diversity of the Disease. Thirdly, If any other Disease, as Fluxes of the Belly, Vomit, &c. follow, let such Remedies be used as are proper for them.

Syl.

XV. A very thin Diet is not to be prescribed to Women with Child in Acute Diseases, lest the *Fetus* be defrauded of due nourishment; and yet we must not pass to that which is very thick, lest the Fever be increased thereby: Therefore we must keep a mean, and a thinner Diet is to be prescribed in the first months, and a thicker and somewhat more plentiful in the last months, for the necessity of the *Fetus*. If we err any way, 'tis safer to err in too full than in too spare a Diet; for health is to be expected from the strength of the Mother and *Fetus*.

XVI. I have more than once observed, that the use of Butter has been hurtful to Women with Child, as also to those who are subject to Fits of the Mother: wherefore I advise them to abstain from it.

P Borell.
obl. 26.
cent. 3.

XVII. Some disapprove of Exercise because it heats, dissolves the Spirits, raises a Fever, causes thirst, and procures abortion by precipitating the *Fetus*. But these things are to be understood of too much, or unseasonable Exercise; otherwise that which is moderate, discusses the Excrements that are collected by idleness; relieves the Faculties that are oppressed by the plenty of retained superfluities; diffuses the Blood and Spirits to the Members, whereby the whole Body becomes vigorous. But let it be omitted in the first month, because the *Fetus* is then contained but by weak bands: In the second let it be seldom and slow: In the third more brisk: In the fifth, sixth, and beginning of the seventh more frequent: In the later end of the seventh, the eighth, and to the middle of the ninth abate of it. Whether it may be granted when her full time is at hand, see the Title *Partus*.

XVIII. Women with Child that labour of a Pica or depraved Appetite, are not to have the same things prescribed them which are convenient for others; for neither Purgers, nor other Medicines that absterge violently are to be used, for fear of miscarriage. For seeing this symptom happens chiefly in the first months, it follows that we must proceed warily, especially seeing *Hippocrates* forbids purging about that time: And in the fourth month, about which time it would be safer to use Medicines, the Malady ceases of its own accord,

(* C c c c)

accord, the Matter being either spent by frequent Vomiting, or much alter'd by the concoctive faculty, (seeing such Women eat little because of the loathing that is joined with it) the stronger attraction of the *Fætus* helping, which through its growth draws and spends much Blood at that time. Therefore this Malady is no otherwise to be remedied but by a convenient Diet, ordered for attēperating of the offending Matter, by a slight absterſion, and gentle provocation to Vomit, namely, if Nature incline that way, not neglecting those things which may serve to strengthen the Stomach inwardly and outwardly. ¶ The *Pica* of Women with Child admits of neither Purging nor Vomiting, but only requires those things that Corroborate: the chief of which are the Water or Salt of Cinamon, and of Orange or Citron rinds, with the magistery of Corals and Perls. If the thing they long for cannot be got, that the *Fætus* may suffer no prejudice, presently give her to drink some of the Water of white Vine or Briony.

Hort. probl.
6. dec. 19.

Hartm.
prax. Chy-
miatr. c.
133.

Johan. Ray-
mond. Fort.
co. ſult. 60.
centur. 4.

XIX. The Vomiting of corrupted Meat and of other Humours cannot hinder Bleeding, seeing it self is the Remedy of Vomiting. See before, *ſect. IV.*

XX. If *Nauſea* and Vomiting be very urgent, and be very afflictive to Women with Child, so that there be fear left some greater mischief supervene, *Opiats* and *Narcoticks* may be used, as both tempering the acrimony of the Humours, and also bridling their vicious Effervescence, likewise dulling all sense, and so powerfully restraining and staying over great and troublesome Vomiting; and by the help of these they are reduced to a convenient tranquillity, and their Stomach and small Gut are strengthened; by which means both other altering Remedies, and also even Aliments themselves may be taken with the better success: For indeed all these things are taken in vain while a violent loathing and vomiting continue, which is to be wholly allayed before either Aliments or gently altering Medicines can be retained.

Sylv. de le
Boe Prax.
l. 3. c. 6.

XXI. We must act cautiously and with premeditation in stopping of Vomiting; for we must not do that unless in case of evident necessity.

Fortis conf.

XXII. If a Flux of Blood happen to a Woman with Child that is hastening to the time of her Travail, by which she is much enfeebled, the mouth of the Womb is to be closed without delay, lest the ambient Air draw forth a greater quantity of Blood; and the Spirits that are spent are to be recruited, that she may be able to bear the pains of her Travail. Now her Travail is not to be promoted either by things taken in at the mouth, or by Clysters; for by these the flux of Blood would be increased: but 'tis necessary to pull forth the *Fætus* by force, putting your hand up into the Womb. The weakness of the neck of the Womb whose Ligaments are relaxed, favour this operation; so that the mouth thereof gapes as if often pains had preceded. Unless the Waters break forth of their own accord, the Membranes that contain the *Fætus* are to be gently burst by your Hand, and the *Fætus* being caught by the Legs must be pulled out. For in this case we must proceed no otherwise than if some House were on fire, in which case we break open the Doors if they be shut. There is only this way of safety both to the Woman and her Burthen, and the omission of it hath been destructive to many.

Obſetrix
Gallic. in
obſ.

XXIII. The Wife of N. thirty years old, in the beginning of her ninth Month received a slight blow on her Belly, and the next day moving her Arms strongly in making a Bed, there began a small flux of Blood from her Womb, which continued for two or three days, but ceased betwixt whiles: But on the twelfth day after, there flow'd out so great plenty of Blood, that in three or four hours time she was brought very low. First Bleeding her

in her Arm, astringent Clysters were order'd her, but the Flux continuing, and the Patient perceiving no motion of the *Fætus*, whence we thought it was dead, and that the Womb endeavouring to free it self of an unprofitable Burthen, contracted it self continually and expelled the Blood, but yet that it did not perform that motion so strongly as was necessary for the Birth; we judg'd it necessary to use all art for provoking the Birth, that the immoderate profusion of Blood might be stanch'd, which otherwise was like to bring the poor Woman to her end. Wherefore a Clyster was ordered of the Emollient decoction with *Catholicon* and *Diaphanicon* of each six drachms, of the Oil of Lilies three ounces, with a drachm of Salt, with which she was well purged, and presently after she had parted with it, the Flux of Blood was much lessened; which may seem strange, seeing such Clysters are likelier to increase the Flux: But I think this happened from hence, that the Womb was pressed by Excrements contained in the straight Gut, from which oppression so soon as it was freed, it begun to collect it self, and to restrain that preposterous motion, that it might betake it self to a more natural. But seeing after the Clyster was parted with, the Womb attempted nothing, but the Efflux of Blood still continued, and it was evident the *Fætus* was dead, to exclude it there was given a drachm of the salt of Vitriol in four ounces of Bugloss Water, which seemed proper in two respects, First, Because by raising a Vomit the Womb was also irritated to exclusion, because in Vomiting all the parts of the *Abdomen* do violently contract themselves: Secondly, Because the salt of Vitriol is endued with a very great astringent virtue, whereby it may conduce to the stanching of Blood. She Vomited twice pretty sorely, and cast up much Bilious, Phlegmatick, and Serous Stuff, and a little after her Travailing Pains came on, which having continued for four or five hours, this Potion was given to further the Birth: Take of *Dittany of Crete*, both Birthworts, and the Troches of Myrrhe, of each half a scruple, of Saffron and Cinamon of each twelve grains, of Confectio Alkermes half a drachm, of Cinamon Water half an ounce, of Orange Flower Water and Mugwort Water of each an ounce and half. Upon the taking of this within a quarter of an hour with very strong and twice or thrice repeated strainings she excluded the *Fætus*, whose Skin beginning to putrefy seem'd torn in divers places. A little while after she excluded the Secundines also halfe-rotten, her *Lochia* flowing moderately after that.

Riv. cent. 3.
obſ. 24.

XXIV. There is great difficulty about the use of *Astringents*, and on that account the Cure is very difficult: for if we retain the Blood by things that astringe, then we run into more cruel symptoms, because the clodded Blood being retained, breeds six hundred times more grievous symptoms, according to 6. *aph. 20.* For as much as Blood in the Vessels is friendly to Nature, so much injurious does it become afterwards when extravasated, for it becomes like Poison. How must we proceed therefore? I answer, That all Internal Remedies ought to be astringent, and the External, especially about the region of the Belly and Womb, by no means astringent; for by that means they should be destroyed languishing, especially, when they void clodded Blood: yet Astringents may be applied to the Reins.

Epiph. Fer-
dinand.
hist. 3.

Pruritus,

Pruritus, or Itching.

The Contents.

- A stubborn Itching cured by Issues. I.*
A scabby one cured by Scarification. II.

I **M**^{R.} N. having been ill for some months of a Sciatick pain, and a troublesome or rather painful itching almost all over his Body, and could hardly go any longer leaning on a Staff; I advised him to empty his Body of bad Humours, (for he was very Cacochemical) and to free his Viscera from obstructions. But he being averse from Physick, I made two Issues, one in the left Arm and another in the right Ham, by the benefit whereof the Sciatick pain, and also that very troublesome itching remitted by degrees: And the acrimonious, salt, and naughty Humour, the immediate cause of each Distemper, being by the help of Nature plentifully discharged by the Issues, it caused for some months pains in the Hams by twitching the Nervous parts.

Hild. cent. 4.
 obs. 75.

II. An old Nun being almost for two years troubled with a scabby itching of her Hands, which she used almost to tear in pieces with scratching, when it could be allayed by neither Internal nor External Medicines, I cured it by making frequent Scarifications.

Severin.
 med. eff. p.
 76.

Puerperarum affectus, or the Diseases of Childbed Women.

The Contents.

- When Venesection is to be used. I.*
The manner of Purgation in their Acute Diseases. II.
Cooling Alteratives are necessary when they fall into a Fever. III.
The allaying of the After-pains by giving the Powder of the Secundine. IV.
When the pains arise from Wind how they may be allayed. V.
They have ceased by a cold draught. VI.
Eggs are hurtful. VII.
Wine is to be denied. VIII.
If they be costive how they are to be loosened. IX.
Sleep is not to be granted presently after delivery. X.
Of the Fevers of Childbed Women see Book 6.
The After-pains ought to be allayed. XI.
They cannot be cured unless the cause be known. XII.

I. Authors disagree much about Venesection in the Acute Diseases of Childbed Women; there are scarce two to be found that agree in the same opinion: Omitting Circumlocutions I shall in the following Theorems propound here that opinion which comes nearer the mind of the wiser Physicians, and succeeds the more happily in practice. An Acute Disease invades a Childbed Woman either in the beginning, or in the middle, or in the end of her lying in. If it happen in the beginning, and the Woman be plentifully purged, no other Evacuation of Blood is to be attempted than that which is directed by Nature working rightly and conveniently: But if her Purgations be suppressed or diminished, let the lower Veins be opened, and let Blood freely, because then the Evacuation ought to be large according to the precept of Nature. If an Acute Disease happen in the middle time, two things are to be considered; One, whether the Morbifick Matter be contained and rivetted in one particular part; or be dis-

persed through the Veins; the other, whether the Woman have had sufficient Purgation, or no. If the Disease be caused by a dispersed Matter, as in Fevers, and the Woman be not perfectly cleansed, the lower Veins are to be opened, because both the Morbifick Matter will be lessened, and the natural Flux provoked: But if she be sufficiently purged, and the Disease be strong, and the natural Evacuation be not sufficient for the Disease, the lower Veins are likewise to be opened in this case, and so much Blood is to be taken as may make both Evacuations amount to as much as the Disease requires, as Galen teacheth 9. meth. 5. If the Fever be very high, and there be a great burning, let that be done which we shall by and by advise to be done in a Disease from Matter fixed and putrefying in some particular place. In a particular Acute Disease, as a Pleurisy, Peripneumony, Quinsy, &c. we must note whether the Fluxion be only a beginning, so that the Disease is only imminent or beginning, and but a very small quantity of Blood is as yet collected in the part: For then the lower Veins are to be opened, that Revulsion being made to the most distant opposite parts, that preposterous motion of the Humours may be restrained: But if the Fluxion be already made, and the Inflammation bred in a great part, and the Inflammation be very high, whether the Woman be sufficiently cleansed or no, the upper Veins are presently to be opened on the same side with the part affected, because such Evacuation draws Blood out from the said part: But if the lower Veins should be opened, which are neither near to the part affected, nor can draw from it, both the Faculty will be injured by the Evacuation, and the Matter that is fixed in a particular part will not be diminished: And so you shall either draw forth almost all the Blood to reveal the Morbifick Matter from the part affected; or the Woman shall be killed by the Disease, before sufficient Revulsion be made. Nor must we fear lest by letting Blood in the upper Veins the Blood should be drawn back from the Womb, because in those cases the upper parts abound with Blood: and though much be evacuated, yet the Veins are not so emptied as to be compelled to attract new Blood from some other place. Yet for the greater caution it will not be unprofitable before Blood be let, to make Frictions in the Thighs, and then to make painful Ligatures in their middle, which must be kept tied till Blood be let, and loosed a little while after: and after that apply Cupping-Glasses to the same parts, or at least repeat the Frictions: hereby we may procure an Evacuation of the offending Matter, and a Conservation of the Natural Flux. The same is to be done in burning and violent Fevers, because though the Matter be dispersed, yet the burning is only about the Heart and Viscera, so that it cannot be extinguished so well by the opening of a small and remote Vein, as of a near and large one, such as the Basilica of the Arm is. This method of Cure is not only fitted to Childbed Women, but may be adapted also to other Women taken with an Acute Disease, and having their monthly Purgations. If the Disease happen in the end of Childbed, the same is to be done as in the middle, the same Conditions being observed: this being noted, that the more the Woman is distant from the beginning, the safer may the upper Veins be opened: but the nearer she is thereto, even in the middle time, we must do it with the greater premeditation; and if the Disease be not urgent, and her Natural Purgation be plentiful, let us abstain wholly: But if the Purgation be too little, we ought to open the lower Veins to make up the due quantity: And if the contrary shall happen, let that be observed which we said was to be done in an urgent Acute Disease.

Laz. River.
 lib. 15. c. 24.
 ex Petr. Sal.
 Diversi de
 affectu part.
 c. 23.

II. The

II. The use of Purgation in Childbed Women taken with an Acute Disease shall be concluded in the following Theorems. While the *Lochia* flow naturally, Purgation is never to be administered, for there is danger lest Nature should be diverted from her work: But if her Natural Purgations become preternatural and disorderly, we must consider whether they offend in quality or quantity. If they offend in quantity, and that too little, and the Woman be either not at all, or not sufficiently purged; after that all Remedies that are proper for promoting this sort of Purgations have been used in vain, and the Morbifick Matter appear concocted, eight, ten, or twelve days being past from her delivery, according to the greater or lesser urgency of the Disease, she may be purged with some gentle Medicin, wholly abstaining from the more violent. If the *Lochia* offend in quality, so that the Fluxion look white, or be of some other preternatural colour, the Matter being concocted, Purgation shall be administered safely towards the later end of their lying in. But this is always to be observed in general, the longer the Childbed Woman is distant from the time of her delivery, the safer may a Purge be administered; and on the contrary. For Experience has taught, that Women who have their Purgations suppressed, if after the seventh or ninth day they fall into a looseness, are generally recovered: But if a *Diarrhoea* happen on the first days, viz. the first, second, or fourth, they generally dye.

River.

III. In a Fever following the suppression of the *Lochia*, let cooling *Alteratives* be given, let Women prattle what they will; which yet must neither be acid nor altringent: The Whey of Asses Milk, the Juice of Endive or Succory Clarified, the distilled Waters of Endive, Succory, Borage, Maiden-hair.

Fortis, tract. de morb. mul. p. m. 106.

IV. *Rondeletius* taught, that the Powder of the dried Secundine being drunk in a convenient Liquor did presently allay the *After-pains*: And because Brutes use to devour it, they are therefore free from those pains, as he knew by Experience in his little Bitch, from which having taken away the Secundine, he said, he observed that these pains did also supervene.

Placrus, tract. rom. 2. p. m. 524.

V. A certain Childbed Woman exposing her self to the Winds and Air too unseasonably, fell into intolerable pains, and could not be recovered: At length there came an old Midwife, who called for three Nutmegs grossly bruised; then she set an Earthen Pot under the sick Woman with live Coals in it, and presently sprinkled the Powder of the Nutmegs thereon, bidding the Woman so place the Pot that was set under her, that she might receive into her Womb the smoak or nidour of the Powder through a Funnel whose straiter end was to reach to the Genital parts: At the same moment of time she also received the same smoak in at her Nose and Mouth from another Pot; which having penetrated, the Woman presently cries out, I must needs go to Stool: which she had hardly spoken, but there was heard such a hissing, as when Gun-Powder contained in some narrow Case or Squib is set on fire: which Wind having thus burst forth, forthwith in the very moment the Woman was freed from her pain. Being thus informed by Experience I have sometimes since then in the like case found the same Remedy profitable and beneficial.

Solenander, sect. 5. conf. 15. 166. 29.

VI. My dear Wife, *Johanna Spanhemia*, being always cruelly griped after her delivery, which Gripes no art could allay, although all things which use to be propounded were tried; at length in the month of May 1675. being happily brought to Bed of a Boy, and but just laid down in her Bed, being very thirsty after the pains of her Travail, she extorted from her Nurse a draught of very cold Pusian, when her Gripes were just a

coming, which were wholly repressed by this Remedy without any prejudice. I had lately the opportunity to try the same, with good success, in a Cholerick Woman, the Wife of a Clock-maker whose name was *Morellus*, her Purgations flowing very well afterward. Whether was the Orgasm of the Blood by this means appeased, which was making an hasty exit, and distending the Vessel, being turgent in them, or irritating them by its acrimony? Such a Drink may be very profitable in the Cholerick, by tempering the heat of the Blood.

VII. Those do amiss who give Childbed Women potch'd Eggs betimes in the morning and before Meals; for seeing *Hippocrates* (1. de morb. mul. sect. 2. vers. 156.) approves of them when the Purgations flow immoderately, it is an evident argument that they have a vertue to stop them, so that by their use the Purgations may be stopp'd when they flow as they should do, than which nothing can be imagined more hurtful.

Martianus.

VIII. Old and racy Wine is not safe for Childbed Women at the beginning, because the Pains of Travail are follow'd by a great Perturbation of the Humours in the Body, which might be carried up into the Head by the drinking of Wine: 'Tis also suspected lest some harm might accrew from it to the parts which belong to the Womb, or are adjoining, from whence an inward Inflammation might arise.

Idem.

IX. From the weakness of the Muscles of the Abdomen (which contribute much to the expulsion of the Excrements) Childbed Women are very subject to be *Costive*; and not only from their continual keeping their Bed, as is vulgarly supposed: For from the preceding Travail the Muscles of the Abdomen are as yet weak: In which case Looseners are given in vain, from the too great use whereof the Coats of the Stomach become too slippery, whence concoction is injur'd. Something of Turpentine, or Aloes or Rhubarb are more convenient for these, which both stimulate the Belly, and have a friendly Symplicity.

Hoefer. Herc. med. 1. 3. c. 5.

X. Cautious Women that attend upon Women in Travail, will not permit them to sleep presently after they are deliver'd, lest whilst they sleep, too much Blood should flow out without notice.

Idem, 1. 7. c. 5.

XI. Those Physicians are deceived that following the Opinion of some Womes, think that Womes *After-pains* are therefore profitable, because the flowing of the *Lochia* is promoted thereby; the contrary whereto often happens, seeing sometimes they do not flow, though these pains be never so violent. Add hereto that many Women have no such pains, and yet nevertheless their *Lochia* flow, and that indeed far better than when those pains are urgent.

Those are likewise deceived that follow Women in an Opinion, that these pains do seldom or never follow upon a Womes delivery of her first Child, but only upon the second; and that they become greater and greater every time a Woman lies in: For daily Experience shews the falsity hereof, at least in these Countreys, where yet many are possess'd with this opinion, which is not only erroneous, but also hurtful, especially the former, because by this means the Cure of these pains is neglected and hindered by many esteeming them to be profitable, though the neglect of them have so often been the cause of death to many Childbed Women.

Sylv. prax. 1. 3. c. 9. sect. 2. & 4.

XII. Wherefore it is of concern to know the true cause of the said Pains. Seeing they follow upon the delivery, the most frequent cause thereof is deservedly to be derived from those things which use to happen to Child-bearing Women in the time of their Travail. Now there are two things which are the most observable, the exclusion of the Fœtus, and the separating of the Secundines from

from the Womb, and their exit out of it. In the exclusion of the *Fetus*, that is, in the very delivery, 'tis sufficiently known that pains are caused, but such as grow less afterwards and vanish by little and little. But the After-pains we are speaking of are quite of another nature, beginning a ter the delivery is over. As to the separation of the *Secundines* from the Womb, as also their exit out of it, Women are sometimes wont to be pained anew thereby, because they are often knit pretty straitly and firmly to the Womb, and grow so to it, that they can hardly or not at all be separated therefrom without the tearing either of themselves or of the Womb. Now none is ignorant how acute pains are felt in excoriated and torn parts, especially as oft as any Liquor, and chiefly that which is acrimonious and biting, approaches them: Whence it is no wonder if after the strait connexion of the *Secundines* with the Womb, and the violent pulling off of the same, and so Excoriation of the Womb, and the afflux and efflux of the *Lochia*, great pains be caused there. But it is to be noted that those pains chiefly afflict Women both that are delicate and of an exquisite sense, and have their *Secundines* also straitly knit to the Womb, not to be separated therefrom without violence. We must observe moreover, if the Cure of these pains be neglected, that every time a Woman is brought to Bed they are sorer and sorer; which perhaps has given rise to that Erroneous Opinion concerning these Pains, which was mention'd above. Lastly we must observe, that Women with Child do either hasten, or are hastened too much to their delivery; so that before the *Fetus* is come to its full maturity, and the *Secundines* prepared for an easy separation from the Womb, the Birth is precipitated, whence both the *Fetus* is expelled with difficulty, and the *Secundines* separate from the Womb, and pass out of it with the like difficulty. Add hereto, that in these Countreys many Women with Child do too much indulge themselves in the use of Aliments that are of too thick and glutinous a substance, from which alike Blood being produced knits the *Secundines* straiter to the Womb; whence seeing the Blood grows more and more glutinous, 'tis no wonder that the *Secundines* should stick closer to the Womb every Labour than other. Therefore the primary cause of the pains after delivery, is the too strait connexion of the *Secundines* to the Womb, and thence the tearing of them from the Womb, and so the Excoriation of the Womb: But a second cause, and which joins it self to the former, is the Blood of the *Lochia* flowing through the torn and excoriated parts of the Womb, and biting and gnawing of them. And though all Blood, whilst it moistens the excoriated and torn parts of the Womb, causes pain in them; yet the same pain is not a little increased when the Blood is more acrimonious than usual from any cause, either through an acrimonious serum mixt with it, becoming so by the Bloods stagnating every where, and therefore also in the Vessels and Sinous Cavens of the Womb. Other causes may also contribute, as cold taken in the time of Labour, which stops the *Lochia* in part or wholly; whence the same Blood being made more acrimonious by its stay, causes a pain in the Womb, whether there succeed an Inflammation, or only the Serum flow forth, and that little and sharp, biting and gnawing violently the inner parts of the Womb. Cruel pains are likewise caused by *Flatus*, distending both the Womb it self, and also the thick Guts that border upon it. Moreover as a Fever is oft raised from violent pains in the Womb indisposed through hard Labour, or by an Inflammation thereof; so every Fever produces pains in the Womb, that is, when it is first indisposed; the which we see to happen in any other part.

The Physician may guess at the true causes of *After-pains* (besides other things) from the manner of the pain; for if they be rending, and return and afflict more grievously by Intervals, he shall judge them to arise from acidity and salines abounding in the Blood and carried to the Womb: If they be beating and burning, he shall suppose that the Blood stays and stagnates in the Womb, and that it inclines to an Inflammation, or is already inflamed: If they be distending, and the lower part of the *Abdomen* shall be observed to be stretched, he shall guess that the pains are produced from Wind. So when the *Lochia* have been before the pains, 'tis probable that these spring from the suppression of those, at least partly: When they flow too plentifully, he shall guess that the Vessels or large Orifices of the Womb are torn, especially if the *Secundines* were separated therefrom with difficulty. If the Belly be bound and there be rumblings in it, suspect *Flatus*: When it is loose, and especially when the Patient has many Stools with griping, 'tis probable the Pains have their rise from Acrimonious Humours that are carried not only to the Guts, but also to the Womb, as also if the privy be withal eroded and excoriated.

Wherefore as oft as the *After-pains* have their rise from the tearing and excoriation of the Womb through the violent expulsion of the *Secundines*, so often are such Medicins to be used as lenify, and consolidate the Excoriation, for which purpose all that are called *Vulneraries* are deservedly commended, amongst which when there is withal an over large flux of the *Lochia*, those that are somewhat astringent are to be chosen; to which both Anodynes and Narcoticks will be profitably joined, by the help whereof the vertue of the foregoing is not a little increased, and the pain allayed. If the Blood of the *Lochia* be more *serous* and sharp, let it be tempered with Anodynes which are to be used chiefly in the form of Emulsions, adding sometimes *Opium*, or *Laudanum Opiste*; after which, if the strength can bear it, give a gentle Hydragogue, and after that a Sudorifick made of such things as astringe gently, as *Avens*, *Tormentil*, &c. When the same Blood is rendered more acrimonious by its stay, then, because the acrimony which is then produced is acid, things that temper the said acrimony are to be used, but so as that they increase not the afflux of Blood, whence amongst *aromata* or Spices those are to be chosen which are least acrimonious, but are most kindly, and withal gently binding. If the *Lochia* be suppressed from taking cold, and the foresaid pains proceed from hence, those Medicins are to be used which cure the suppression of the *Lochia*: If notwithstanding that the *Lochia* flow, yet these pains be produced, then Sudorificks will be profitable, such as are not very Aromatick nor much astringent, lest the Flux be either increased too much, or stoppt, adding Opiats that ease the pain and increase the vertue of the Sudorificks: If an Inflammation of the Womb be begun from a suppression of the *Lochia*, it is to be cured by both inward and outward Remedies.

Idem.

Puerperia, or Womens Childbed Purgations.

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 How to recall them when they are supprest by taking cold in Travail. XX.

I. **A**mongst External Remedies expelling the Secundines, Hippocrates gives the chief place to Sternutatories, 1. 2. Epid. sect. 2. and aph. 5. 49. Galen gives the reason aph. 5. 35. that by their vehement shaking and tossing they partly excite Nature, and partly shake off such things as closely adhere to the parts of the Body: Namely when the Brain is violently moved, all the Viscera are shaken as well as it, and the Muscles of the Belly are contracted, which contribute notably both to the expulsion of the Fetus, and also of the Secundines. Yet here is need of caution; let Medicines precede that are taken by the Mouth, as Hearnus advises, 1. 1. Meth. and Aetius bids us abstain from them if the Patient be weak. ¶ My Wife from an outward violence miscarried of an Embryo of six weeks, an Inch long, that had all its Members shaped, so as that its Genitals and the Roots of the Hairs of the Head might be discerned, the Secundine staying behind: The mouth of the Womb being shut, did not admit the Midwives Hand: Amongst other Remedies I blew up into her Nose the Powder of the Flowers of the Lilies of the Valley; when she was about to sneeze I presently held her Nose and shut her Mouth, and her Breath bursting forth violently, the Secundines were expelled, and so my Wife was deliver'd from imminent danger of her Life.

II. Those offend who endeavour to bring down the Secundines by rude and strong Frictions with their Hand: They only by this means excoriate the Skin and so increase the Pains and Torments, whence there follow afterwards Watchings, Fevers, and other evils. Let it suffice to lay the Hand only strongly upon the Belly, especially when the Woman feels pains about the Pecten or bottom of the Belly, as Rod. a Castro advises, and stroak your Hands gently from the sides towards the middle of her Belly, as it were with a trembling Friction, as Borgefia admonishes, c. 14. obs. Gal.

III. N. Myrespus causes Vomiting with Soap, a raw Egg, and warm Water: Borgefia, obs. c. 14. causes Vomiting by putting the Finger down the Throat: As for my self, I suspect whether Vomiting be good, because it hinders the endeavour

or straining of the Childbed Woman, and pulls the Womb with the Stomach upward: Unless we think with Gardonius (p. 7. c. 17.) that the expulsive Faculties of the lower parts is excited thereby, which being stirred up expels hurtful things: I add that the Secundines are stirred thereby, and are then more easily expelled out of the Womb.

Idem.

IV. 'Tis doubtful whether or no we should stay a good while before we cut the Navel-string in two: For on the one side there is fear of a violent retention of the Secundines from an unseasonable cutting of the Navel-string; and on the other, if it be too long deferred, the Fetus will be in danger, or will become sickly. I say, If the Woman be nothing benefited by the Remedies taken within twenty four hours space, the Navel-string ought to be cut, and we must tie that part of it that still is joined to the Secundines, to the Womans Thigh very strongly, lest it retire to within the Cavity of the Womb. I deny not but an hasty cutting in two of the Navel-string is sometimes necessary, namely when the Umbilical Vessels are filled with a clammy Mucus or Phlegm, because these indicate the Fetus to be sickly. ¶ Rod. a Castro, 1. 4. c. 7. defers not the cutting of the Navel-string above six hours. No necessity compels us to stay so long, because the Midwife taking hold of the Navel-string after it is cut, may better draw away the Secundines with her Hand, than the weight of the Child could do while the string was whole. For when the Navel-string is cut in two, both the Midwife may more conveniently search for the Secundines, and the Fetus it self is kept more safely, and defended from External Injuries.

Zacut. Pr. hist. 1. 3. c. 19.

V. In all extraction lest some errour be committed and we fail of our desire, these necessary Cautions are to be noted: 1. We must take care not to pull directly, lest we bring forth the Womb also; but the Secundine is to be drawn this way and that way obliquely, and more and more strongly by degrees. 2. We must act with a gentle Hand, not with violence or on the sudden, for fear of Inflammation, lest the Soul and the Secundine be drawn out together. Let that Childbed Woman affright us, whom Foresius speaks of, 1. 28. obs. 80. who when the too bold Midwife did hastily pull out the Secundine, the Woman falling into a swoon died presently. 3. See that the mouth of the Bladder and the Membranes of the Womb be not hurt with your Nails.

Barthol. ubi supra.

VI. Sometimes Nature uses to help, who when the After-birth is left behind, expels it either presently whole, or afterwards when it is consumed with putrefaction. On the third day it was evacuated by a Woman of Larissa, on the same hour of the night in which the Child had been born, 5. Epid. hist. 13. A certain Woman, as Riverius relates, cent. 2. obs. 3. after ten weeks expelled by piecemeal the Secundine now parched. It is Hippocrates's opinion (1. de morb. mul.) that the Secundines do for the most part putrefy, yet pass out on the sixth or seventh day, or also later. This Opinion is abetted by Aetius, retr. 4. f. 4. c. 24. Agineta 1. 6. c. 73. If the Secundine cannot be brought forth, we ought not to be disturbed, for after a few days it will come out putrefied and dissolved into Sanies. Zecchi gives the same Counsel, consult. 68. But sometimes that hope is deceitful, and 'tis an uncertain Remedy to commit the business to Nature, when it comes not out presently after the Fetus: Delay is dangerous, nor can we promise to our selves that every ones strength will hold out, or assure our selves of the certainty of the desired success. Mercatus, 1. 4. c. 4. Rondeletius, c. 65. advise it to be done warily, and to inject betwixt whiles such things as detergo. L. a Fonte, consult. 118. alledges daily Expe-

Idem.

Th. Barth. cent. 5. obs. 39.

Idem.

Idem.

Hofen, 1. 7. c. 36.

Eiol. Buchi 1. 6. c. 36.

Experience, that the retention of the Secundines does daily produce the most grievous symptoms in Childbed Women, so that the greatest part of them die on the fourth day. Therefore it is dangerous to expect Suppuration, seeing 'tis doubtful what Nature will be able to do, and the symptoms are uncertain. By what happens when but a piece of the Secundine is left behind, we may make a bad prognostick of what will come to pass when none of it is brought forth; for Nature does not overcome even a piece without difficulty. There is oft no Suppuration, but death ensues upon the retention. ¶ Great Caution is to be observed in the use of Suppuraters, for the Secundine putrefying causes very grievous symptoms, Fevers, and those Malignant, whereupon death ensues; and 'tis better to promote the Excretion thereof by all the means we can, than to expect Suppuration: for even therefore is the staying of the Secundine dangerous, because it putrefies and suppurates. *Salus* relates that he saw a Secundine expelled putrefied, and yet the Woman was no better; which was a sign that there was a Putrefaction grown, that ceased not when the Secundine was expelled. But if there be no grievous symptom, and the Woman be weak, we must expect Suppuration even whether we will or no; but we ought never to promote it, lest Putrefaction increase.

Idem, ibid.

Primros.
de morb.
mul. l. 4.
c. 9.

VII. If we make question of the order of Remedies, by a great consent of Authors, the *Manual Operation* recommends it self first of all, next *Medicines*, and lastly *Suppuration*. *Fabr. Hildanus* prefers *Manual Operation* before Medicines on a double account, 1. because they ought to be deduced into act by the benefit of Nature, which being weakened by the preceding pains, before she can acquire new strength with time, the door of the Womb is shut, and the Secundine putrefies, and by its Putrefaction infects and corrupts the adjacent parts, and dejects the strength more and more: 2. because most expelling Medicines are hot, and do above measure heat the inner parts, whence follow a Fever, inquietudes, watchings, and other symptoms, and for the most part death it self. And the Operation (extraction) is to be hastened, if it be either Summer, or the Putrefaction acquire a Malignity; for the Women appear to be ready to dye when Putrid Vapours ascend to the Vitals, Stomach and Brain.

Idem.

VIII. *D. Animus* left for a Secret a Plaster to be applied to the Belly, of the white of an Egg and red Lead: which because it binds much, may well be question'd whether it do not rather detain the Secundines within. But because it constringes the Muscles of the Belly, which through the extension of the Womb and the straining in Travail were before debilitated, 'tis therefore credible such a Plaster may help: for these Muscles being constringed and contracted into themselves, by pressing the Womb from above downwards they make it more apt to expel the Secundines: even as the action of the same Muscles is not a little necessary for the expulsion of the Excrements of the Belly.

Hoeserus,
l. 7. c. 5.

IX. Seeing Medicines that expel the Secundines do also increase the Flux of the *Lochia*; hence Physicians are put into a quandary: wherefore *Rondeletius*, cap. 63. advises to give a drachm of *Carabe*, for it provokes Urine, expels the Secundines, and retains the flowing Blood: The same is confirmed by *Platerus*, *pract. l. 2. p. 449*.

Riol. Enchir.
l. 2. c. 36.

X. If all the *Placenta* be not extracted, it is in no wise deadly: and the place where it was pluckt off by force, does a while appear tumid, rough, and unequal, till all the Womb be drained again and reduced to its Natural Figure: all which things are to be diligently marked, especially in Childbed Women that are ill.

XI. I have observed the following Apozem taken to three ounces twice or thrice a day, to pro-

fit and recover the Patient when part of the *Placenta* has remained in the Womb after an Abortion, and has been accompanied with a continual Efflux of Blood for some months. Take of the Roots of *Bistort* two drachms, of the Leaves of *Majoran*, *Pennyroyal*, of each an handful, boil them in Water and White Wine of each as much as is sufficient for thirty ounces of strained Liquor, to which add three ounces of the Syrup of *Mugwort*, and one ounce of *Cinnamon Water*. I have seen a piece of the *Placenta* as big as ones Fist expelled by the help hereof, and the further Flux of the Blood was withal suppressed and cured.

Fr. Sylvius.

XII. *Job. Th. Schenkius* in his Botanic Lectures did once relate how a certain Countess had her *Secundine* stay three weeks after her delivery, without any notable prejudice: And then by the persuasion of an old Woman she took a decoction of Roman Chervil, and was soon eased of that burthen. And indeed I hardly know any Herb of like availableness in hard Travail and the stoppage of the Secundine, as Chervil and the greater *Sempervivum* (or House-leek:) and I know that every one who makes trial thereof rightly, will say the same.

Al. Herm.
com. milt.
cur. ann. 72.
obl. 117.

XIII. Concerning sleep we must note, that it is wholly to be kept off when the *Lochia* flow very plentifully: for by it many lose their Lives, because the heat being drawn inwards makes the Flux the greater: And if it be to be allowed at any time, some of those who attend ought to be ever and anon observing the Pulse and Respiration of the Patient.

River. Pract.
l. 15. c. 21.

XIV. After the Birth the capacity and thickness of the Womb are lessened by degrees by the effusion of the *Lochia*, which are nothing else but the expression of the Blood that is contained within the spongy Membranes of the Womb. But if that amplitude be not lessened, nor the Blood evacuated, it will then putrefy and inflame; the Womb will remain extended and hard as if it contained the *Fetus* still, and at length a deadly Gangrene ensues. Whether is this amplitude and hardness to be cured by Bleeding in the Arm, or in the Foot? *Fernelius* does boldly draw Blood out of the Arm; *Pereda* advises us to consider not whence the Blood flows, but into what part it hath flow'd, and bids us open the nearest Vein. 'Tis more profitable and secure to let Blood largely in the Foot accordingly as the strength can bear, not neglecting cooling Clysters, and other things that may irritate the Womb to excretion.

Riolan. Enchir.
l. 2.
c. 36.

XV. When the *Lochia* either flow not at all, or they come to be suppressed by some External cold, they shall be cured by giving presently Medicines that dissolve Phlegm or Blood coagulated in the Orifice of the Womb; such as are all Aromatics, and those which are endued with a Volatil salt, chiefly those called Uterines, which are found to profit by long and manifold Experience: and if they be withal sudorifick, they will do more, and will the sooner and better take away that difficult and dangerous Disease. But when through the defect of the Flux of the *Lochia* a Fever is raised, which uses to be continual, and is often burning enough, we must take diligent heed not to increase the Febrile heat by those Aromatics; and therefore to these Portions Acids are to be added, distilled Vinegar, the Spirit of Salt, of Vitriol, &c. For observing this Temperament, we satisfy both Indications, seeing Acids are profitable for the Febrile heat, and the same as well as the Aromatics are good for dissolving the coagulated Phlegm; especially when there are added Crabs Eyes, *Antimon. Diaphoret.* and the like, which then may dissolve the Coagulated Blood also.

Sylv.

XVI. When the eruption of the *Lochia* is too large from the surface of the Womb being hurt by a violent pulling off of the Secundines, it shall be

cured.

cured by those things which heal Excoriation, and restrain the Efflux of Blood: As for Example, Take of Plantain Water half a pound, of the An-repilectick of Amsterdam, and Distilled Vinegar, of each half an ounce, of Lapis hamatites half a scruple, of red Coral one scruple, of Laudanum Opiate two grains, of the Syrup of Myrtles one ounce, mix them; give now and then a Spoonful of it, and by the help hereof both the Flux will be stayed and the Excoriation healed. Nor are Internals only convenient here, but Externals also, Ointments, &c. which have a lenient vertue because of the pains that arise from the Excoriation, and consolidate also, being anointed upon the lower part of the Abdomen, and sometimes also on the region of the Loins. With which Medicines, as well Internal as External, Opiats are profitably mixed, as not a little increasing their vertue, whence the ulcerated parts of the Womb are then the more happily and sooner consolidated, and the Flux stayed with better success.

Idem.

XVII. A Woman being eight months gone with Child was taken with a continual Fever: on the third day she miscarried, and after her delivery her Lochia were quite stopt, purple Spots appeared all over her Body, and her Fever was high. I prescribed Bleeding in the Ankle, cold opening Julaps, Frictions of the lower parts, Fomentations and a relaxing Liniment to the Pubes and Perinaeum; but all in vain, for towards the end of the second day after the Abortion, the Fever grew worse with raving, and by the changing of her Countenance she seem'd in danger of her Life. Then I order'd a Vein to be open'd in her Arm, and there came forth a corrupt Blood to ten ounces: I repeated Bleeding after four hours, and order'd her very cooling Julaps, of the decoction of Lettuce, Purslain, Sorrel, with Sal Prunella; she had also a cooling and Emollient Clyster; the next day her Fever was very small, her Lochia begun to flow, and in a few days she recover'd without other Remedies.

River. cent.
1. obl. 80.

XVIII. Some naturally have a larger, others a more sparing Flux of the Lochia; whence you may observe them to flow in some but for two, three, or four days, in others for eight, ten, or more; and that sometimes in a considerable quantity, and sometimes but in a small, whether that more plentiful or more spare Flux continue longer, or cease sooner: which is diligently to be observed by Physicians, that they be not presently disturbed at the Lochia their flowing more or less plentifully, nor endeavour either to stop or promote them without necessity. Now those Women who have their Terms or Monthly Purgations flow plentifully, have their Lochia or Childbed Purgations flow so also; and on the contrary. Wherefore as often as Physicians are called to Women in Childbed, and especially presently after their delivery, and become solicitous about the Flux of the Lochia; so often must they enquire concerning the manner and quantity of the Monthly Fluxion, whereby they may guess whether the Flux of the Lochia be to be thought natural, or more or less swerving therefrom. But that that may more appear, the Physician must enquire, whether the Woman endure any trouble or uneasiness; if she endure none, he has no reason to endeavour rashly to change the Flux of the Lochia what such soever it be: but if she do, he must see whether it may and ought to be attributed to a too plentiful, or too sparing a Flux of them: for she should in vain be toiled with altering the Flux of her Lochia (be it what such it will) when she suffers no detriment by it. Therefore from the two mentioned signs shall the prudent Physician guess whether the Flux of the Lochia (what such soever it be) be according to, or against Nature.

Fr. Syle.
Prax. 1. 3.
c. 10.

XIX. But the Flux of the Lochia is not then to be said to be suppress'd, or to be none at all, when the Blood flow'd forth plentifully during the Travail, and that is the reason why there flows little or none afterwards; because that which according to Nature should have flown forth only after the Birth, flow'd forth preternaturally during the Travail. Whence if no Flux of the Lochia be observed to follow the Birth, unless the Woman suffer some detriment thereby, their Expulsion is not to be endeavour'd by any Remedy, but the strength of the Woman is to be increased by

Idem, ibid.
sect. 14. &
32.

XX. But if besides the Efflux of Blood during Travail, the Woman took Cold in at her Womb, and there be fear lest she should suffer some mischief thereby, we must see to give her in time some Aromatick Sudorifick, by the help whereof that hurtful Cold may be expelled forth, and a greater mischief may be prevented. A pain and swelling in the Hypogastrium doth further urge the same thing, for this argues the Womb to be amiss: In which case, besides the Sudorifick, 'will be good to anoint the lowest part of the Belly with a Liniment, and if the Belly be costive, to inject a Carminative and Emollient Clyster. In this case no letting of Blood is requisite, unless there concur or succeed a pretty high Fever, which yields not to other Remedies, but is troublesome by its great heat.

Idem, sect.
33, 34, 35.

Pulmonum Vomica, or an Imposthume of the Lungs.

The Contents.

The Curatory Method of a burst Tubercle or Imposthume. I.
An Instance of a successful Cure. II.

I. IF after the bursting of a Vomica (whereof a Man dies for the most part, though I have known several that from a Vomica bred insensibly, ripened, and at last burst, have caught up a great deal of sinking Pus; and when they have continued to spit such Matter daily for many weeks, yea months, have at length been entirely recover'd by the help of such Medicines as cleansed and dried up the Ulcer, and were proper for the Consumptive) and the spitting of Pus begun without declination of the Spirits and Strength, there be place given to any Curatory Method; The Curatory Indication will be, that the Matter of the Abscess be speedily spit up, and its sides cleansed, and consolidated as much as possible: the Preservatory, to prevent the conflux of new Matter to that nest, or other bordering places of the Lungs (whence a Phthisis might be generated:) And the Vital, to cure the Languishings of the Spirits and the collapsed Strength, and to restore frustrated Nutrition. For the first Indication, the Remedies commonly call'd Expectorating, are good, viz. such of them as being hotter and rougher will cleanse and dry more, and especially the Sulphureous, seeing a Fever is for the most part wanting in this case. 2. The Preservatory Indication, that cuts off the Morbifick Matter, endeavours the depuration of the Blood, and the strengthening of the Lungs; for which ends, Purgers, Vulnerary Decoctions, Distilled Waters, and Diet-drinks are proper. 3. The Vital Indication prescribes Cordial Remedies, Anodynes, and a fit manner of Diet. The forms of Medicines are almost the same in this case as for an Empyema after Section: and let the same Diet be ordered

ordered as in a beginning Phtisis. Asses Milk is not profitable also in this case.

Concerning the Cure of this Disease I have often observed that an Issue made in the Side has greatly profited. I remember two ill of this Disease, who after the Vomica of their Lungs was burst and they had cough'd up a great deal of Pus, were cured in a little time by this Remedy. In both out of the hole made in the Skin by Section, there flow'd in three or four days time pure Pus, and from that time their spitting such Matter diminished: And after that Efflux increasing daily had continued for some time, the spitting ceased wholly, and the Patients grew quite well.

II. A Gentleman of a middle Age, that was robust before and always healthful, without any manifest cause grew to be betwixt well and ill as it were; for being without Pain, Vomiting, or Cough (at least that was any thing considerable) he became in a little time languid, without appetite, un inclinable to sleep, thirsty, and hot about his Heart. After that divers methods of Cure had been tried in vain, the Disease shewed it self at length; for whilst one night being more restless than usual he turned himself strongly in his Bed, an Abscess breaking of a sudden in his Lungs, he expelled by Cough a vast quantity of very stinking Pus. The Vomica being burst, such Medicines were diligently given as might cleanse and heal the Abscess, might purify the Blood and clear the Lungs, and deliver them from an imminent Tabes; as my *TinBura* and *Spiritus Diasulphuris*, together with Pectoral and Vulnerary Decoctions and distilled Waters. Likewise *Lindus* and Balsamick Pills were taken from day to day in a constant method; and betwixt whiles Clysters, and gentle Catharticks and Diureticks were interposed. First Vaporations, then Suffumigations, both Sulphureous and Arsenical, were used morning and night. After that these had been used long and diligently without benefit, he consented at length to the opening of his Side: On the left side of his Sternum there appeared a Tumour betwixt the fifth and sixth Vertebra. In stead of a Caustick I applied hereto a Suppurative Plaster, and in three days the top of the Tumour became red and soft, out of which being opened the next day there first flow'd a thin Ichor, and a while after yellow and concocted Pus, and afterwards it continued to flow more plentifully: From that time his stinking Spittle decreased, and in fourteen days quite ceased, the Morbifick Matter finding both a more easy and more convenient exit by that hole. Though by the effect it was manifest that the Duct of that Orifice did lie open inwardly into the Breast, and perhaps to the middle of the Lungs, yet no Liquor that was injected by Syringe could penetrate or be driven thither; so secret and very intricate are the passages which Nature forms for her last relief, that no hurtful thing can enter in by that way whereby the Morbifick Matter is expelled. That Aperture of his Side was at length changed into an Issue, and a Pease or Wooden Pill being put in it every day, it continued to pour forth Ichor plentifully for half a year; and the Nobleman in the mean time getting quite rid of his Pectoral Infirmary, and recovering his robust habit of Body, became quite well in every respect. At last the Issue being translated into his Arm, he carried neither the Disease nor the Issue any longer in his Breast.

Idem.

An Intermittent Pulse.

The Contents.

The cause depends sometimes on the irregular motion of the Animal Spirits. I.

An instance of a Pulse returning upon the voiding of a Worm. II.

I. **T**Here are two distinct Reasons of the breeding of this Affection: for though the Pulse intermit sometimes, because the Heart for that time ceases from motion; yet when we judge by our feeling, it seems to intermit sometimes in the Wrist, whilst the Heart is felt to beat very frequently and incessantly in the Breast, because when that passion (its tremor) urges, only a very small portion of Blood is cast forth into the Aorta in every Diastole. Wherefore the Aorta being empty and flabby, and wanting a load to promote, that it may not act often in vain, it sometimes intermits its contraction. Moreover in Malignant or deadly Fevers, if at any time the Pulse be frequent and weak, it now and then also intermits; not that the Heart ceases sometimes from motion, (for it does then especially labour incessantly) but in as much as the Blood is not poured forth into the Aorta in a sufficient quantity at every Diastole; so that this having not enough to bestow its labour upon, idles sometimes. But moreover, the Pulse does sometimes intermit, because the contraction of the Heart it self is suspended for some turn, or its pause is twice as long, which indeed any one shall easily perceive in himself or in another by laying his Hand upon his Breast; yea those who labour under a weight or oppression of their Breast, do plainly perceive of themselves how often their Heart ceases from motion. Moreover this Affection does every where seize upon not so much the languishing, and those who are ready to die, or are dangerously sick, as those who are strong enough, and in most regards very well: Wherefore it ought not according to the Vulgar Opinion to be taken always for an altogether destructive sign. From what has been said I think it appears, that the cause of this Affection depends not on the mixture or crisis of the Blood, but only on the irregular dispensing of the Animal Spirits out of the Cerebel into the Cardiac Nerves, and from thence into the Tendons of the Heart. For we may suppose, that through those Nerves being somewhat obstructed, the Animal Spirits descend not to the Tendons of this Muscle in a sufficiently full stream or Influx: wherefore when their store is a little defective, the Pulse of the Heart ceases now and then for one turn, till being by and by recruited with a fresh store of Spirits its action may be renewed. Though this Affection do not want present inconvenience or danger, and requires no very hasty Cure; yet for preservations sake, lest more grievous Diseases follow, some Remedies and Curatory Method ought to be used; at least let the Diet be rightly ordered in every regard during the remainder of the Patients Life: Moreover let a light Course of Physick be prescribed to be observed solemnly every Spring and Fall; namely to the end that, as much as may be, any Morbid Seminaries cast into the Brain, or apt to be bred there, may be taken away and prevented. Hither we refer the Preservatory Method and Medicines which use to be prescribed against Fits of the Apoplexy.

Wills.

II. Mr. N. a Man of sixty, was ill of a Dy-
sentery for many days, and afterwards of a Ter-
tian Ague; and at length when he seem'd to begin
to recover, his Pulse appeared to be intermitting
for three or four days, with anxiety of mind,

and dejection of his Spirits: The Cause betray'd
it self, which was a Worm as thick as ones Finger,
and half as long as ones Arm; upon the voiding
whereof the Pulse returned to its former state.

River. cent.
3. obl. 3.

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A GUIDE TO THE Practical Physician.

BOOK XV.

Of Diseases beginning with the Letter R.

Rachitis, the Rickets.

The Content.

The Description, Cause, and Cure.

I. **T**HE Rickets are a Disease proper to Children, and peculiar almost to the *English* Nation: The signs thereof are a swelling of the Belly about the Stomach, especially on the right side, under the region of the Liver; the Epiphyses of the Bones at the Joints are too bulky for their Age, or in comparison to the rest of the Body, especially those of the Arms and Legs; The Bones themselves are flexible almost like Wax, so that they cannot sustain the weight of the Body, and therefore their Legs and Thighs, (as also often the Back-Bone) become crooked; Their Head grows too big in proportion to their Bodies; and their Chest is strait, and their Breast-Bone at first depressed, but afterwards sharp.

The containing Cause is a too thick, clammy, viscid, obstructive, moist, and cold alimentary Juice in the Bowels, namely (in one word) the Cheesy part of the Blood: and the more serous

part of the Blood in the Bones and Cartilages, in the more notable Cavities and External parts. And the Disease it self seems to consist in the position of a thicker, Cheesy, and obstructive Blood in the Bowels; and also in a defect of Nutritious Juice owing to the Bones and External parts, and in an afflux of serous Humour in lieu thereof. The Antecedent Cause, which makes and moves the containing, is the weakness of the Pulses, or a weak Circulation of the Blood, which doth not sufficiently irradiate the mass of Blood with an influent heat, for the preservation of its Heterogeneous parts in perfect mixture, but they are coagulated and heaped up in divers parts. The Procatartick causes are either in the Parents, or Nurses, or Infants. In the Parents the Causes are a *Gonorrhœa*, the *Scirvy*, Kings Evil, the *Lumbago*, or other long and especially cold and moist Diseases of the Brain and Genitals. In the Nurses all such things may be causes as make their Milk thick, viscid, and obstructive. And to the generation and hastening of this Distemper may contribute the bad custom of hiring Nurses to suckle the new-born Infants, whose Milk (as being old) is not fibrous and thick; whereas the serous *Colostræ* (or first Milk) of the Mother were far better for the tender Infant, who has need of Purging as well as Nutrition. For the new-born Infant abounds with Phlegmatick Excre-

ments in its Belly, and requires a Medicamentous Milk, such as the Mothers is for the first Months, which may both purge and nourish. The Procatartick Causes in the Infants are to be fetched from our thick and moist Air, and from the peculiar manner of nourishing and treating our Infants. For no where that I know of is Flesh granted to Infants so largely and so soon as in England. This Disease is most frequent amongst the Children of Persons of Quality; next amongst those of the poorest sort; and least amongst those of a middle Condition. The cause of the first I reckon to be the intemperance of the Parents, and because hired Nurses have the care of their Children; and of the second, (besides bad Diet) want of Fire, long soaking in their Excrements, and the use of cold and not well dried Cloths.

As to the Prognostick, such as are born Ricketty, or fall into them presently after they are born, die all. There are more Girls have them than Boys, but the former recover sooner and more surely. Those whose Surres do not close, but their Brain feels like a Quagmire, generally die. Those that can go, are more easy to cure. When the Neck can hardly bear the Head, or where there is a great difficulty of breathing, they seldom escape; but when the Lungs are suppurated, never.

The whole Cure is performed by satisfying these Indications: viz. the thick and clammy Humours which obstruct, and retard the Circulation of the Blood, are to be prepared and evacuated; the serous Humours are to be carried off; the Circulation of the Blood, or the influent heat is to be increased in the outer parts: and lastly the External Symptoms are to be taken away by appropriate Remedies. These are reckoned to be Specificks in this Disease, the Root of Osmund Royal, the Livers of Rooks dried in an Oven after the Bread is drawn, and powdered; also Frogs Livers. Our Women anoint the Spine and all the Limbs every day once with this ointment: Take of Salt, the Leaves of Chamomel, Rosemary, Sow-thistle and Lavender, of each two handfuls, of Wormwood and Laurel, of each one handful, of black Snails bruised a pound, boil them in May Butter till they are all slabby, and then strain them. Then they sprinkle some of the Powder of the Root of Osmund Royal in all that they eat or drink. Lastly they give twice a day some of the decoction of the said Root, and of Speedwell, Yarrow, Harts-tongue, Raisins, Lyktyrhize, and Aniseeds. If you will observe a Methodical Cure: Purge with Syrup of Roses, Syrup of Sucory with Rhubarb, the Augullan Syrup, the Syrup of Roses with Agarick, the infusion of Senna, and of Rhubarb, the Powder of Rhubarb. But their tender Bodies are not at the beginning to be toiled with frequent Purging, seeing the Matter is so clammy that it will not follow them: therefore after a gentle clearing of the first ways, we must come to appropriate and Experienced Preparers; amongst which the following is much commended. Take of Rosemary half an handful, of Liverwort, Scabious, Agrimony, Maidenhair, of each an handful, of Speedwell three handfuls, of the Root of Osmund Royal four ounces, of Corianders an handful, of Aniseeds four spoonfuls, Boil them in six pints of Spring Water to three pints: Add to the strained Liquor of Sugar Candy as much as suffices to sweeten it: and let lie in it two drachms of yellow Saunders grossly powdered and tied up in a Rag. Let the Patient drink a draught hereof in the morning, at four in the afternoon, and in the evening. After seven days, unless a Purgation follow of it self, add to the former Decoction two drachms of Rhubarb, and of the Syrup of Roses with Agarick as much as suffices; of which let him drink for seven days more, and then re-

turn to the former Decoction. Then make one Issue or more; especially make one in the Neck. Let him be kept warm and dry.

Rickets: where you have particular Remedies for all the symptoms. See also Dr. Giffson's accurate Treatise of the Rickets.

Raucedo, or Hoarsness.

The Contents.

A Pertinacious one cured by help of a Seton. I.
The efficacy of the Syrup of Hedge-Mustard. II.
When caused by Exhalations and Vapours, it requires a different way of Cure. III.

I. **O**NE was ill of a Hoarsness and Erosion of the Almonds of his Ears, by reason of a thick and sharp Catarrh: He committed himself to a Physician, who advised him to have a Seton made, for revulsion and evacuation of the sharp Humours; but another Physician withstood it; and in the mean time the Disease increased. At length he came to me at Lausanne, I advised him to a Seton likewise; by which Remedy chiefly, under GOD, he was cured.

Hildanus.

II. *Syrupus de Eryfino Lobelii* (called *Syrupus Prædicatorum*) is commended, which the Author says is *Laudatissimus Arteriacus*, and he writes, *hist. Stirp. pag. 103.* that by taking of it he cured a young Woman who had had a Hoarsness ten years, and that others who have laboured of a tedious and almost incurable Hoarsness, have been cured by this Syrup of Hedge-Mustard. And I do affirm, that I have often experienced the goodness of this Medicin in a very difficult Hoarsness after a Catarrh: And therefore all Shops should have it ready prepared: Take of green Hedge-Mustard (the whole) six handfuls, Root of Elecampane, Coltsfoot, then full of Juice, Lyktyrhize, of each one handful and an half, of the Cordial Flowers, Flowers of Rosemary, *Stachas* or Berony, of each half an handful, Aniseeds six drachms, Stoned Raisins two drachms. Boil them in a sufficient quantity of Barly Water, and of Hydromel and Juice of Hedge-Mustard of each six ounces to two pounds or three. Add to the Colature a sufficient quantity of Sugar. Make a Syrup according to Art.

S. Schultzeus, M.D. Cur. ann. 72. obs. 153.

III. I have observed that a most grievous Hoarsness, which lasted for several months with a total deprivation of Voice, was cured only with Spirit of Sal Ammoniac, by giving a few drops of it every day in the ordinary Drink. And from the singular Cure of this particular Hoarsness I reckoned, it had its rise from a Saline Muriatick Spirit, not so much eroding the parts allotted for Voice, as disaffecting them some inexplicable way, which would not give way at all to gross Medicins, but yielded easily to this Spirituous one: That is, since common Medicins that were proper to correct and carry off Salt Muriatick or Acid Humours, were almost used in vain in this loss of Voice, I might very well think, it was not produced by the gross and Corporeal Humours, but by some in the form of a Spirit or Exhalation: And therefore that it must in like manner be cured with Spirituous Medicins; but sub-contrary, and therefore with Salts, not fixt, but volatil, which had a power to correct and amend, both the Acid Salt, Muriatick and Glutinous Humours, and the Spirits and Exhalations of them, and therefore with Spirit of Sal Ammoniac; which the good success and Cure confirmed, though it went on but slowly.

Sylvius de J. Boc.

Renum

Renum Affectus, or Diseases of the Kidneys.

The Contents.

We must be prudent in the use of Diureticks. I.

Whether the vertue of outward Applications reach them. II.

Many Diseases ascribed to other causes, derive their original from some fault in them. III.

Renum Inflammatio, or an Inflammation of the Kidneys.

What Vein must be opened in an Inflammation of the Kidneys? IV.

A Purge is proper in the declension of the Disease. V.

Cassia is hurtful. VI.

Suppositories are better than Clysters. VII.

Repellents and Attrahents must not be put in Clysters. VIII.

When Diureticks are proper? IX.

When the Kidneys may be opened in the Loins? X.

External Coolers must not be abused. XI.

Renum Intemperies, or Intemperature of the Kidneys.

Drinking of warm Water is good for a hot Intemperature of the Kidneys. XII.

Cooling Topicks must often be renewed. XIII.

Renum Prolapsus, or a slipping forward of the Kidneys.

It is difficult to know, when the Kidneys are slipped forward. XIV.

Renum Ulcus, or an Ulcer of the Kidneys.

Sometimes a Vomit is good for Ulcerated Kidneys. XV.

Some Purgatives do harm. XVI.

Whether it be good to drink Milk? XVII.

Horsehound is an Enemy. XVIII.

An Ulcer is very difficult to cure. XIX.

Renum Dolor, or Pain in the Kidneys.

A desperate pain of the Kidneys eased by opening of the Hemorrhoids. XX.

Clysters must have no windy things in them. XXI.

Renum Imbecillitas, or Weakness in the Kidneys.

The Signs of Weakness in the Kidneys, and its Cure. XXII.

I. WE must never go to work with Diureticks, especially with violent ones, in Diseases of the Kidneys. (See Tit. of Diureticks, BOOK XIX.)

II. Although Galen 6. Epidem. sect. i. comm. 6. write, that Medicines applied to the Kidneys are of no use, both because their substance is very thick, and because of the many parts that lie over them, which hinder the vertue of the Medicin from penetrating: Yet this is no sufficient Obstacle, because Medicines by long application do at length exert their virtues upon the inmost parts, as the same Galen 6. tuend. sanit. cap. 14. has observed.

III. The Noble Lord N. forty five years old, had been troubled for some months with a salt Catarrh about his Genitals and Anus. After he had been more than enough tormented for three whole months with the severity of his Disease, and with Medicines, he repaired to me as to his last refuge. I reckoned, that the cause of this Disease ought not to be laid to the alone intemperature of the Liver, as is now the custom of Empiricks; but to the bad constitution of the Kidneys, because of which a salt Excrement being long detained in the Body, uses to breed such things, and that Openers, not Coolers, ought to be made use of. For often after immoderate or unseasonable Venery, and in such as live upon a gross, feculent, and salt Diet, the Kidneys are affected in this manner; Hereby the

Expulsive Faculty being spoiled, and the passages of the Kidneys obstructed, the salt Excrement is forced to go back by the Veins, and is cast off thence by sweat through the Skin, where, according to the various nature of the thing, whence it proceeds, sometimes it is dissolved, sometimes coagulated; sometimes it is of one nature, sometimes of another. But in a short time the said Nobleman recovered his health by the means following; The first day he took tincture of Corals; and Specificum Stomachicum, (which some take to be the Flowers of Sal Ammoniac) both of which purge the Blood, and strengthen the Inwards, the Kidneys especially. To make the first region clean, I gave Decoctum Catholicum purgans and refrigerans for several days. Ourwardly Balsamus Saturni, and Calcinatum majus dulcificatum in a short time completed the Cure.

Potterius, cent. 2. cap. 64.

Renum Inflammatio, or an Inflammation of the Kidneys.

IV. Blood must be let in the Arm, when the Inflammation is new, with a flux of Humours and plenitude of the whole, as Forestus, obs. 30. l. 2. says. But it must not be done, when the Inflammation is of any continuance, and no Fluxion of Humours, or plenitude of Body with it: because it is then requisite, that the Matter be evacuated and derived by the next places, which is by Bleeding in the lower Veins.

Horstius.

V. Though a Purge be not proper in the beginning, lest the disturbed Humours should flow more to the parts affected, so that if a violent looseness come at that time, it must be stopt: Yet when the Inflammation is a little laid, and the Disease is declining, a gentle purge may be proper, of Manna, Rhubarb, Diaprunum Simplex, Catholicon, and Syrup of Roses, with a decoction of Lettuce, Purslain, and other cooling things.

Riverius.

VI. But I would not advise you to give Cassia, as most do, for I cannot chuse but suspect it, since it is a little hot, and carries the Humours to the part affected.

Rondeletius.

VII. In this Disease a Suppository is more proper than a Clyster; yet a Clyster may be given in a small quantity: for a large one distends the Guts, and so, the Kidneys being pressed, the pain is increased.

Idem.

VIII. We must abstain also from those Clysters, which have a repelling faculty; as also from such as are very drawing and irritative; for so Nature will be incited to send more to those parts.

Metcatus.

IX. As for provoking of Urine, you must only do it, when the Inflammations are perfectly concocted: otherwise you will but exasperate, and increase the Afflux. Wherefore we must let it alone, till the Pain be laid, and the Fluxion ceased. And therefore the greater cold Seeds must be omitted in Emulsions, because, seeing they are Diuretick, they might carry something towards those parts, especially while the Fluxion is still in motion; for in the declension they may be of use.

Idem.

X. If it appear, that the Tumour tends to the outside of the Loins, and if pain and throbbing be felt by the touch, upon the Kidneys, so that it is evidently apparent, the Ambient Membrane is rather inflamed, than the substance of the Kidneys, (for in this case only, I think, opening of the Kidneys in the Loins is safe; for, I reckon, that the Kidneys themselves when opened with a red hot Iron, do seldom or never heal, and though Life remain, it is but calamitous and miserable) it is the best way to perforate the part affected over the Kidney, with a red hot Iron, that the virulent Matter may get out. And this may be done by applying Plasters first, which may draw out the Pus to the outside of the Kidney, and may attenuate the part, that the opening may more easily be performed.

Idem.

Idem. XI. We must not insist long on cooling things, lest the dispersing of the Conjoint Matter be hindered, or Scirrhus Tumors should grow.
Zecchius. ¶ Coolers and Astringents outwardly do but keep in the Superfluous Excrements.

Renum Intemperies, or Intemperature of the Kidneys.

XII. Nothing keeps the Kidneys so free from Recrements, and so temperate, as to drink six or seven ounces of fair Water boiled, before Meat, twice, or at least once a day: For their fiery heat is at length extinguished by the coolness of the Water, so that afterwards they cannot breed the Stone.
Zecchius.

XIII. There are some, who once every day apply Oil of Roses or *Infrigidans Galeni* to the Kidneys, for cooling of them. But this may be doubted, because within four or five hours time these Topicks cool no more: For in that time the heat of the part has naturally so exceeded them, and they are become so like and familiar, that they have in a manner lost their whole power of reaction. For Alteratives do not act as Food, which only nourishes and augments the strength, when it is conquered, but before they are conquered; for Example, cooling Alteratives while they react, do cool: But when they are exceeded, the contention and alteration ceases; and from thenceforth no cooling can be expected from them.
Sanctorius.

Renum Prolapsus, or a Slipping forward of the Kidneys.

XIV. Sometimes one of the Kidneys is found slip forward into the *Hypogastrium*, which can scarce be distinguished from the falling down of the Spleen. (See *Tit. de Lienis Affectibus*, BOOK X.)

Renum Ulcus, or an Ulcer of the Kidneys.

XV. Though *Avicenna* highly commend a Vomit for Ulcerated Kidneys, because, as he says, it cleanses and evacuates, and makes revulsion from the Kidneys: And though, as some report, this Disease has been often cured with this Remedy; yet we must take notice, that it must be given only to such as are easy to Vomit: Otherwise the Ulcer would be irritated by its violence. *Rondeletius* advises to give it after Meal, because then it is more easy; he gives Water and Oil warm, and to relax the Stomach, he anoints the mouth thereof with Oil of White Lilies.

XVI. If any one make an Electuary, to evacuate the common Recrements, let him omit *Senna*, *Agarick*, and *Tartar*, if there be an Ulcer in the Kidneys or the Bladder; for they exasperate the parts affected; and so doth *Carthamus*.
Rondeletius.

XVII. Whether is Milk proper? Physicians hold the Affirmative, but with a certain limitation: for in the beginning of an Exulceration, in as much as there is need of greater absterfion, the Antients prescribed Asses or Mares Milk, with Honey. Now a days Goats Milk is given with Sugar as a thing, that by its Nivrous substance has a very absterfion faculty: But if it appear, that the Ulcer is cleansed, Cows Milk should rather be given. For this Remedy, as *Mercatus* says, is both Food and very effectual Physick, for by its ferous part it is absterfion, by the caseous it consolidates, and by the butyrous and fat part it allwages pain and the Disease, and repairs the strength. Nor is it any obstacle, that Milk passes difficultly to the Kidneys, and chiefly hurts the Bowels: for the first is easily helped, if Juice of Lemons and other things, that carry to the Kidneys, be mixt with the Milk: the other need not to be feared, since Milk

is given after Universals. Therefore *Mercurialis* says, When Ulcers are pretty foul, that Milk is proper, which is most absterfion, as Asses, Mares, and Camels Milk: But when they are not so foul, that Milk is proper, which is not so absterfion, and breeds Flesh more, as Goats Milk: At last, when the Ulcers are quite cleansed, that is proper, which nourishes most, as Sheeps or Cows Milk.

Horstius, Qu. 3. Dec. 8.

XVIII. Let Horehound be never so much commended by Botanick Authors for several Diseases, and especially for such as are Chronical and Contumacious in Cure; yet Physicians ought to be circumspect how they use it, since *Dioscorides*, 3. *de re medica* cap. 19. and *Pliny*, lib. 20. cap. 22. do hold, that it hurts the Kidneys, and that it must be avoided in Ulcers of the Kidneys and Bladder. Wherefore since it is evident from *Galen*, that the Colick and the Stone have almost the same signs, or that the Symptoms of these two Diseases can hardly be distinguished one from the other, I would advise no Man to Horehound, when there is the least suspicion, that the Kidneys are amiss, much less, if they be already exulcerated, as being a thing, in my judgment, offensive to the Kidneys in its whole substance. And why, in its whole substance? Because Experience, not Reason, has taught us it is so.

S. Pauli.

XIX. I question, whether there be any hopes of curing an Ulcer in the Kidneys; I do not remember that I or any Man else ever cured one. However something may be given to allwage the Malady, and hinder it from growing worse: To which purpose I have found nothing better than *Balsamus Sulphuris* both *anisatus* and *succinatus*, *jupiperinus* and *terebinthinatus*, but made with the Oil of true Turpentine, not the common; but the *Succinatus* is the best in this case. ¶ I remember I cured an Ulcer in the Kidneys Anno 1662. in the Illustrious and Noble Mr. *de Molendins*, Deputy Governor of *Newenburgh*, who besides a sense of heaviness in the region of his Loins voided Pus and Blood, yea, and Bodies like Worms, and by the Advice also of the Doctors of *Paris* he was cured, besides Bloodletting and Cupping, &c. by the frequent use of Trochises of *Alkekengi* with, and without *Opium*, and also with Chalybeate Milk.

Sylvius de le Boc.

Renum Dolor, or Pain in the Kidneys.

XX. I saw a Man, who was afflicted with an intolerable pain in his Kidneys, which could be eased neither by Phlebotomy, nor Purgings, nor by any outward applications, but by opening the Hemorrhoids. For the Matter that stuck in the Kidneys, caused it; and as soon as way was made, the pain ceased. Yet it does not follow, that the Hemorrhoids must presently be opened, if any one be so afflicted; but if they swell, we may open them boldly.

XXI. In pains of the Kidneys such things must be omitted in Clysters, as breed Wind: And for this reason neither *Cassia* nor *Diacatholicon* must be put in them.

Hollerius.

Solenander.

Renum Imbecillitas, or Weakness in the Kidneys.

XXII. A young Man Twenty eight years old, had for several months always made a red Urine, thin enough in consistence, and almost like to the Water in a high Fever. The Physicians used Medicines, as for an over heated Liver. At length he came to me, and seeing he appeared not to be in a Fever, I asked him, whether at any time he had had a Fever? On the contrary, he answered, as if he had been continually cold for some months, his Body was extenuated, his Spirits low, with shortness of Breath, and what he had taken, had done him no good. Therefore I had a mind, that

He

he shou'd leave his Urine till the next day, that I might consider the Sediment, which was indeed as red as Blood (for it was nothing else but Blood) the rest of the upper part was but low coloured, of a pale yellow, an argument that there was no Fever. Therefore I concluded there was no heat in the Liver, but that the Kidneys were weakened, and that the mouths of the Veins being too open, did let out the thin Blood. Therefore I altered the method of Cure, and used things to strengthen the Kidneys, and bind the Veins: he used a good Diet, and drank Goats Milk: And so the Urine left off being red, and his Body began to thrive, and his strength to come to him: And at length the young Man recoverd.

Dodonæus,
obs. 32.

(See *Calculus Renum*, BOOK III.)

Renunciatio, or Inquest.

The Contents.

Judgment concerning a dead Body, by what mischance it died. I.

Judgment concerning a Childs being smothered. II.

Concerning a wounded Man, whether he received the Wounds alive or dead? III.

Concerning drowned People. IV.

Of a Body killed by Poison. V.

(See A. Paræus of Inquest, and Codronchius his Book De Methodo Testificandi.)

I. IF a dead Body be found in the House or abroad, and the Question be, Whether it was slain by Thunder, or came by some other Mischance? If by Thunder, the Body smells of Sulphur, so that Dogs, nor nothing else will touch it. Under the part, whether it be whole or wounded, the Bones are broken, and the Wound is black. The Body falls on the wounded side; Brute Beasts fall on the contrary side. If one be Thunderstruck waking, he has his Eyes shut; if sleeping, on the contrary. It does not corrupt.

II. One may know a Child has been smothered, if it was well before; If it froth at the Mouth and Nostrils; And if the Lungs, when they are dissected, be frothy.

III. If it be enquired, Whether a Wounded Body received the Wounds alive or dead? If alive, the lips of the Wound are red and Bloody, and the place about it is black and blue.

IV. He that lies drowned, if the Body were cast in alive, all the Belly is swelled with Water, Mucous Matter comes out at the Nose, Froth comes out at the Mouth, and the Fingers ends are as it were excoriated.

V. If a Man, naturally abounding with good Humours, and who keeps a wholesom Diet, die suddenly; If his Body appear black or blue, or of party colours, or flabby, and stinking, it must be concluded that he has taken Poison.

Respiratio Læsa, or Shortness of Breath.

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Cock-Broth must not respect the Lungs only; but the Head, as the Mandant part. IX.

Spirit of Sulphur is not proper for all. X.

When the Fit is coming, we must have a care of Expectoraters. XI.

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Whether both an attenuating and spare Diet be proper? XV.

An Asthma is sometimes caused by Wind. XVI.

One caused by Metallick Fumes, must be cured by appropriate Medicins. XVII.

Respiration is often hindered by the fault of the Stomach. XVIII.

It may be hurt by a cause in the Neck. XIX.

An Asthma caused by a Convulsive motion of the Nerves of the Lungs. XX.

The Cure of a Scorbuteck Asthma. XXI.

I. A Vein must be immediately opened in the Fit of an Asthma, if Blood seem to abound but indifferently; for when the Veins are emptied of Blood, the Breath will be more free. But if the Disease be old, and Blood hath been often let, we must abstain from it, lest, when the innate heat is abated, a greater stock of Phlegm should follow. Bleeding in the Foot is excellent, when this Disease is Sympathick. ¶ Bleeding must not wholly be neglected, which Galen allows to hinder Suffocation, and Hippocrates prescribes in a dry *Oribopnea*: Yet we must abstain from it in the Fit of an *Oribopnea*, because then the strength is low. And Blood may especially be let, when the Patient is hot and moist of Complexion, and the whole Body abounds with Humours. We must Bleed but sparingly in the Arm; or rather the Hemorrhoids may be opened by and by, if it shall be needful, as sympathizing with the Breast.

II. Some dissuade the giving of Purges in the Fit; because that Humour especially which causes the Asthma, is thick and viscid, and cannot easily be evacuated, till first it be prepared; and it must be evacuated by degrees, as must be done in all other Phlegmatick Diseases. 2. Because of the urgent danger of strangling, seeing it may be feared, lest the Matter agitated by a Purge, should not run to the lower Belly, but rather to the part affected, and so increase the danger of Suffocation. On the contrary *Carolus Piso* thinks that a Purge should be given immediately after Bleeding for aversion sake, seeing Purging cannot be deferred without danger of Suffocation; And the Humour being fluid enough of it self, needs no great preparation. But here is need of a distinction; and the nature of the Humour must be considered: For if the Humour be thick and viscid, it is to no purpose to give a Purge immediately; and it is rather disturbed than carried off, whereby the Fit is increased: But if the Humour be thin and serous, and poured out of the Veins upon the Lungs, which *Piso* presupposes, one may very well Purge at the beginning.

III. It must be observed, that the strongest Medicins are proper in this Disease, because the Matter is highly peccant, and of long continuance. Therefore *Paulus* Purges with very strong Medicins, and that constantly; and he approves even of *Coloquintida* (No wonder, if few now be cured, when we give only a little Agarick). *Elastrum* therefore may not only be given in a Dropsy, but also in an Asthma and Orthopnea, seeing they are caused by gross Matter. *Galen* also 7. 227. 2.

cap. ult. approves of the most violent things. We may thus prescribe with *Galen*; Take of Mustard one drachm, common Salt half an ounce, *Elatarium* fifteen grains; grind them together with Water, and make Trochisks. *Galen* makes eight Trochisks, so that in every Trochisc there are almost two grains of *Elatarium*, but not quite two. And that the Cure may be safe, Clysters must be given before we give these Trochisks; and after the Trochisks six ounces of *Mussa* must be given. Practitioners in our time commonly give Pills once in thirty days; but they cure no Man. Therefore after *Galen's* Example, if the Disease be contagious, it is my advice, if not every other day, at least every fourth or fifth day, to give one of the said Trochisks.

Capiuacci.

IV. Though some condemn Vomits, yet they are very proper, as frequent Experience shews; and oftentimes the Fit is taken off with this Remedy alone. The best Medicin of this sort is Tobacco Water one ounce, which may be made into a Syrup with Sugar; the Dose two Spoonfulls. Salt also of *Vitriol* and *Aqua-Benedicta* may be given. And the reason why Vomits are so good in this case, is very plain. Because while the thin Phlegm that falls from the Head, insinuates it self into the *Aspera Arteria* and the *Bronchia* of the Lungs, the thicker part of it falls into the Stomach; and sticks so close to the sides of it, that it can hardly be got off. In the mean time while the faint heat of the Stomach moves that Matter, gross Wind is bred, which puffing up the Stomach, does press upon the Diaphragm, and cause a difficulty of Breathing. Whence it comes to pass that when the Stomach is emptied, the Fit either quite ceases, or does wonderfully abate.

Rivierus.

V. After *Adr. Spigelius*, who was much given to Experiments, had found in dissecting of *Orthopnoick* Persons, that the Coat of the *Aspera Arteria* was inflamed, by reason of a thin and bitious Matter, that was fixt there; He eased Fits of a tedious *Orthopnoea*, with Scammoniæ Medicines, as *Pilulæ Cochæ*, *Auræ*, and others of the same kind.

Rhodius, cent. 2. obs. 28.

VI. *Ludovicus Septalius* does not admit of Clysters; because when the strength is low, and there is imminent danger of Suffocation, they cannot conveniently be given: But yet strength is not always so low as not to admit of a Clyster, which makes a very good revulsion from the Breast. Therefore sharp Clysters must frequently be given, but in a small quantity, lest the distended Guts should press upon the Diaphragm.

Rivierus.

VII. In Pectoral Medicines this must always be endeavoured, that they be kindly and temperate: for if over hot things be given, in the beginning especially, the thinner part of the Phlegm is dissolved, and the thicker is rendered unfit for Expectoration. Oftentimes also Matter is drawn from other places to the Breast by very hot Remedies. And if any one rashly use too strong Resolvents, if the dissolved Humour suddenly fall down, there is danger of Suffocation. Gentle things therefore must be made use of, which conduce to mollify and dilate the Breast; and the use of them must be frequent; for rough Phlegm does not easily suffer it self to be softened and attenuated.

G. Hofm.

VIII. Diureticks may have place in curing a Fit of an *Asbma*, not only when it is imminent, but in the Intervals. And I assert this, not only because it is very true for the most part, that the same Medicines serve both for cure and prevention; but also because it has been experienced that in the very Fit, some have at length been freed from it, not by coughing up of any Matter, but only by making abundance of thick and troubled Urine. For daily Experience teaches, that the Matter which is contained within the Cavity of the Breast

and Lungs is voided by the passage of the Bladder, to the Patients great relief. But in the Intervals and long after a Paroxysm, we have no reason to doubt that Diureticks are proper: for by them the Noxious Humours are averted from the Breast, Head, and Veins to the passage of Urine, before they fix in the Breast, the place of Respiration. And we often see, that they whose Head is subject to be stuffed either by External or Internal Causes, and chiefly while it is hot, if they make much Urine, do find themselves far better in their Head and upper parts. If therefore one be troubled with a Fit of an *Asbma*, and make thicker and more Urine than he used, and thereby begin to be eased of his straits of Breath, no Matter being expectorated by Cough, who can make a question of it, if Diureticks be given with Pectorals, but that the Patient will far sooner be cured?

Crucius de Quæstis.

IX. Care must be taken of the Head as the part Mandant, and of the Lungs, as fuscipient, and sometimes constantly productive of the Matter, by correcting the moist intemperature of both, and by strengthening the lax Lungs. For which purpose *Avicenna* commends Broth of an old Cock, beaten, drawn, and a little salted; alter'd with Hyssope, Lungwort, and Oak of *Jerusalem*, given for a month, first giving a Bolus, made of Turpentine and Powder of Iris. But because it can do the Head little or no good, therefore a Sudorific Decoction will be far more effectual; Take of Wood of *Guajacum*, Mistletoe of the Oak of each two ounces, common Water four pounds. Mix them. Make an Infusion twenty four hours; then boil half away. Keep the Colature for three Doses. It must be given in the Morning an hour before you would sweat, first giving this Bolus; Take of Extract of Elecampane Root one scruple, Flower of Brimstone half a scruple. Mix them. Make a Bolus. Let him sweat in a Stove, that the Head may sweat; notwithstanding the danger of Suffocation, which is usually objected: for that holds good only when the *Orthopnoea* is present. But if the Breath grows short in the Stove, as it sometimes happens in the first days, let the Patient presently go to Bed and sweat; and afterwards sweating will be well born a longer time, even in a Stove. When the sweat is ended, that the drying of the Lungs may be completed, Purging Sulphureous Waters must be given for ten or twelve days: And they will be very good to pump the Head withal.

Fortis.

X. Spirit of Sulphur is given for an *Asbma*: But here we must distinguish between one Idiopathic, for which Spirit of Sulphur may not be used, and one Sympathick, fixt about the *Hypochondria*, for which Spirit of Sulphur may give its assistance. This Spirit will be of greater virtue, if it be distilled with Gum Ammoniac.

F. Hofm.

XI. When an *Orthopnoea* is present, we must act with great caution, lest the Patients be suddenly killed with unseasonable Remedies: Yea, seeing the Physician cannot always be present, the Patient must be instructed how he may be a Physician to himself. Therefore, when an *Orthopnoea* is coming, this must especially be observed, that at that time the Expectoration of the Matter must not be attempted, but by Internal and External Laxatives it must be carried from the *Bronchia* to the Cavity of the Lungs: For while we endeavour to get up the Catarrhal Matter that falls from the Head, and rises from the other Cavities, we bring the same in more abundance to the *Bronchia*, whereby the passage of the Breath being wholly stoppt, the Patient is quite strangled. I have observed this to have happened twice to Physicians. Wherefore first of all Rest must immediately be prescribed, using only Frictions to the lower parts, to hinder the ascent of the Matter sticking in the Cavity: Then let Oil of sweet Almonds, new drawn with-

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out Fire, be in readiness, of which he may take about half a spoonful between whiles: The Cawl of a Wether, &c. may be applied to the Breast, and to make it more laxative, it may be sprinkled with Oil of Sweet Almonds: Or a great Sponge may be applied to it, dipt in a decoction of Mal-low Root, Marshmallow, White Lily, Lykyrrhize, and Fenugreek Seeds, which must not be quite wrung out, and it must be often applied pretty warm, nor must it be suffered to grow cold. But when the Fit is going off, some gentle Expectorant must be given, to wit, when the Matter begins to be concocted, and to be discharged out of the narrow *Bronchia*; for then ease will be found by coughing and excretion of the Matter.

Fortis.

Asthmatis Therapia, or the Cure of an Asthma.

XII. In the Cure of an *Asthma* there are two primary Indications, the *Curatory*, and the *Preservatory*: The first teaches what must be done in the Fit, that the Patient may be delivered out of present danger: The other shews what must be done out of the Fit, for removing of the Morbifick Cause, lest this Disease return often or violently. Therefore when the Fit is upon one, we must endeavour, 1. That in respect both of the Air and the Lungs, more free breathing may be procured; and 2. That the Organs of Respiration may be recalled and checkt in their spasms begun, and usually stubbornly persisting. As to the former, let the Patient be placed with his Body upright, in an open and airy place, free from Fumes and from the Breath of the by-standers: Then we must do our endeavour, that the Lungs being made free from all stoppage and Internal Oppression, and also from External Compression, may fetch the Breath and let it go again freely. To these ends, that the swelling of the lower Bowels may not press upon or straiten the *Præcordia*, the Belly must be emptied with a Clyster, the clothes must be opened. And moreover, because in this case People are usually oppressed, either by the Blood being too Turgescent within the Pneumonick Vessels, or by *Serum*, falling from the Arteries and Glands upon the Tracheal Ducts, the rage of both Humours must be appeased. Therefore, if the strength will bear it, and if the Pulse be strong enough, Bleeding is often proper. Moreover things that discharge the *Serum* and Superfluities of the *Æstuating* Blood by Urine and Sweat, must be carefully used. To which end Apozemes, &c. which they call Pectoral, are highly serviceable: And Testaceous Ponders, Preparations of *Millepedes*, Spirits and Volatil Salts, are taken with success. And in the mean time beside these things, such must be given as open and smooth the passages of the Windpipe, and cause Expectoration; and which may moreover, if there shall be occasion, stop the Catarrh that falls down upon them; to which end *Linæur*, Pectoral Decoctions, and Fumigations are proper. As to the other intention of Cure, to wit, that the Organs of Respiration may quietly return from the Spasms they are fallen into, to their ordinary Functions, (unless this follow spontaneously, after the *Æstuations* of the Blood and *Serum* in the Lungs are quieted) (For we have shewn not only by Reasoning, but by Observations, that a Convulsive *Asthma* is often caused, when the Morbifick Matter, falling upon the Pneumonick Nerves, sticks somewhere in their passages, especially about their Plexus: Upon which, when abundance is gathered, and begins to disperse and move, for that reason the Spirits thereabout, and such as are affluent to the Organs of Respiration, are disturbed, and driven into irregularities; and by and by those Spirits affect others that dwell in the Pectoral and Pulmonary Fibres, and excite them to irregular and Asthmatical Spasms) we must use Antispas-

modicks and Anodynes; for Medicines that are usually given in Hysterick Fits, use to do good in a Convulsive *Asthma*: Spirit of Hartshorn, Soor, and especially of Sal Ammoniack distilled with Gum Ammoniack; also Tinctures of Gum Ammoniack, Sulphur, Castor, *Asa foetida*, Syrup of Gum Ammoniack, Sulphur, Oxymel of Squis and the like, which because they are either of an ingrateful smell or taste, they do as it were dissipate the Spirits, and withdraw them from tumults, and sometimes do much good. But if the Spirits raging in this manner cannot be quieted, we may proceed to Narcoticks, that when some are dispersed, the rest may be reduced to good order. For unless the stoppage of the Lungs, with great oppression at the Heart do hinder, Opiates sometimes do much good. In horrible Fits of this Disease, when other Medicines would do little good, I have often given *Diacodium*, yea, and *Laudanum Tartarizatum* with good success. But they must be given with great caution, because, since they hinder Respiration more (which is already difficult and impeded) they often endanger Life. Moreover, that the Pneumonick Spirits may be recalled from their Spasms, it is sometimes convenient to create trouble to the Spirits in other places; for when any are afflicted any where, usually the rest being smitten lay aside their disorders. Wherefore Blisters, Cuppings, Ligatures and painful Frictions give relief: yea, for this Reason Vomits taken in the middle of the Fit, do good. Thus far of the method in the Fit. The other Preservatory Indication, intending the removal of the Morbifick Cause, has two distinct ends of Cure; The one endeavours to amend the conformation of the Lungs, if it be any way hurt or vitiated; and the other to remove the disorders of the moving parts, and of the Spirits belonging to them. Both these Indications may be satisfied, if the Remedies, called Pectoral, be joined with Antispasmodicks, and if the use of these Remedies be inserted with other Medicines, that respect the Preparation of the whole Body, and the emerging Symptoms.

Willis.

XIII. There are not wanting some, who use Intercipients in a Periodical difficulty of Breathing, about the time of the Fit; in using of which notwithstanding we must act cautiously, seeing they may thicken and fix the Matter in the *Bronchia*, if any be there; which is the reason why Opiates in an *Asthma* are utterly condemned by *Galen*. ¶ Yet if the Disease continue, we must endeavour to intercept the Matter, which the following Medicin will do excellently well; Take of *Laudanum Nepenthes Quercetani* one grain or one and an half, *Diapenidum* one drachm: Let it be taken one hour after Meal: And if you cannot have *Laudanum*, you may take one scruple of *Philonium* in its stead.

Fortis.

Idem.

XIV. In an inveterate *Asthma*, which will not yield to other Medicines, burning in the Neck, Breast, and Back is commended (for unless we proceed to burning, they die) about the middle between the *Vertebra* and the middle between the Ribs. And the Burnings must be pretty broad, between superficial and deep; and the Ulcers must be suffered to run a long time. If the fluent Matter come from the Head, we must burn in the Coronal Suture; if from the whole, the Arms and Legs must be burnt. The Burnings must be made in the intermediate spaces of the *Vertebra* and the Ribs; for the Bones hinder the going out of the Matter.

Capivac.

XV. It is a Question, Whether an Attenuating Diet be proper for Asthmatics, because *Galen*, lib. de Attenuante victu, writes, that he has cured Shortness of Breath and other Chronical Diseases, by means of it, without any Medicines. *Hippocrates* is alledged on the contrary, aph. 1. 4. that

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in long Diseases a spare and exquisite Diet, is ever untare. But the case is plain, the *λεπτή διαίτα*, or spare Diet, which *Hippocrates* speaks of in the said Aphorism, is one thing: for he has only regard to the form and quantity of Diet; to wit, when Meat easy of concoction, and in a small quantity, and less than the Patient is able to concoct, is given him; to which a full Diet is opposed: *λεπτήν τροφήν* and *λεπτοπυλὴν διαίτην*, or an Attenuating Diet is another thing. This respects only the Quality, which extenuates viscid and gross Humours in the Body: An Incrassating Diet is opposed to this. *Galen* treats of an Attenuating Diet in a particular Book, in which he describes Meats to be attenuating, because they bite the Senses and are sharp; and he reckons up those Meats: And it is certain, that such Meats are good for Asthmatics. But whether a spare Diet be proper is very doubtful, because according to *Hippocrates in Morbis*, it is not very safe.

Sennertus.

XVI. Sometimes Wind does distend the Lungs so violently, that it would cause Strangling, unless it were prevented by tapping between the fourth and fifth Rib of the Breast, which is often done at *Paris* to the Patients great benefit, and ease of the Breast; though no Water come, but Wind bursts out with a violent disposure. *Hippocrates* calls them, whose Breast is distended with Wind, *πνευματικά*.

Riolanus.

XVII. A Goldsmith's Child was ill of almost a desperate Asthma, and no Medicines proper for this Disease, would do him any good. At length when I was called, I presently suspected the Malignity of a Mercurial Fume had produced this Disease, because the Father acknowledged that for several days about the beginning of this Disease he had been Gilding Plate, while the Child was by. I therefore by and by gave him twelve grains of *Mercurius Dulcis*, once and again, by the benefit whereof the Child was delivered from imminent danger of Strangling.

Horstius.

XVIII. The Figure of the Stomach is in a manner oblong; because a Man's Back is broad, whence it is, that the roundness of the Stomach runs into a length. They that have a round Stomach, do immediately after Meal breathe difficultly, the Stomach pressing upon the Diaphragm according to *Galen in Arte parva*. If these People eat often and little, they are rid of that difficulty in breathing.

XIX. There is a Branch of a Nerve sent from the fourth, fifth, and sixth Vertebra of the Neck to the Diaphragm. Wherefore if this should cease, or be deficient in motion from the Head of this Nerve's being affected, either by compression or a blow, upon which a Scirrhus disposition should arise; then, to reduce the Diaphragm to a good Condition, we must have recourse to the Neck, not to the Breast.

Sanctorius.

XX. Sometimes I have observed grievous Fits of an Asthma come, without any remarkable fault in the Lungs: So that truly I have sometimes thought this Disease to be merely Convulsive, and that the Fits of it were raised, only because the ferous Matter, full of explosive Particles, entering the Nerves of the Lungs which perform the *Diastole*, joined it self with the Spirits there: Which afterwards through plenitude or irritation, flying out thick and for a good while, the Lungs are kept stiff as it were, and puffed up; so that they can neither perform the work of Inspiration nor Expiration: But when the Fit is over, and before it begins, the Breath is taken free and equal enough, and no Cough nor any signs of a Valetudinary disposition of the Lungs do appear. In many that are taken with this Disease Vomits especially do good, as the famous *Riverius* observes; But the Reason is this, because such Physick, greatly shaking and irritating the Emunctories about the first ways,

do strongly squeeze out and carry off the Recrements of the Blood and Nervous Juice from them, which are apt to be forced and stagnate into the Nerves. *Zacutus* does not without reason highly commend Issues sometimes in the *Bregma*, sometimes in the Neck, or about the Armpits. Preparations of *Mullepedes*, that is, either in form of a dry Powder, or of a distilled Liquor, seldom fail of success: for such recall the superfluities of the Serum from the Head and Nerves, and carry them to the Urinary Passages. Gentle Purges are also good, as is a decoction of an old Cock, and other things appropriate to an Asthma. (See the Section following.)

Willis.

XXI. Of all the dire Symptoms of Scorbutick Persons difficulty of Breathing and straitness of the Breast, coming by Fits, are the worst. I think they for the most part arise either from a sudden stagnation of the Blood, that is just growing grumous in the narrow passages of the Lungs, or from a Convulsive irritation of the Nerves, which serve the Organs of Respiration. In the first case there is an exceeding distention of the Lungs, and thence as it were an immobility, with a sublivid redness in the Face, a dimness of sight, swooning, a low, weak, intermitting Pulse, accompanied with despair of the Patients recovery. But in the later case the Pulse of the Heart and Arteries is not very irregular, the Party is troubled with a dry Cough, together with an anxious straitness about the Heart, and deep sighs, stopping the Breath. For when the Blood, because of its thickness, stagnates in its Circulation through the strait passages of the Lungs, such things are proper, as by powerfully attenuating, inciding, and moving it, do restore it to a requisite fluidity, and to a more expedite Circular motion. 1. Carminative Clysters, for Revulsion. 2. Blood-letting, where there are signs of a Plethora; for so, when the Blood is diminished, the rest will more easily be attenuated, and will pass the straits of the Lungs with a quicker motion. 3. Hot Thoracicks mixt with Antiscorbuticks of the same virtue. Tincture of Saffron, Elecampane, Castor, *Elixir Proprietatis*, *Confectio Alkermes*, Flowers of Sal Ammoniac, *Benzoin*, Volatil Salt of Vipers, Horfe-dung, Spirit of Sal Ammoniac; A spoonful either by it self or in some convenient Vehicle, in a small but a repeated Dose: for these do excellently keep off the Fit, by keeping the Blood from Coagulation. For it is found by Experience that Coagulated Blood is dissolved by a Volatil Salt, diluted with Water; and besides Volatil Salts, there is not any thing found fit to prevent or dissolve this Coagulation. For a Scorbutick Asthma from a Convulsion of the Pneumonick Nerves (See the foregoing Section) Antispasmodicks promise a Cure, which are experienced to have the faculties of dulling, suppressing, and discussing this irritating acrimony of the Humours or Vapours. For this these things are cried up, Spirit of Sal Ammoniac, Hartshorn, Soor, Castor, *Spiritus Lavendulae composuit*, mixt with appropriate Liquors, and taken in repeated draughts, while difficulty of Breathing is urgent; Castor also, *Galbanum*, *Asa fetida*, and their Tinctures drawn with *Aqua Raphani compos.* or *Lumbricorum*. But in such a shortness of Breath, which threatens to choak the Patient, there is no more present Remedy (See *Charleton*, Section XII.) than a few grains of *Laudanum Opiatum* dissolved in good Canary Wine, and infused till the Tincture is extracted, and a spoonful of it given now and then.

Rheu-

Rheumatismus, or a Rheumatism.

(See *Febris Rheumatismi* comes Book VI. and *Lumborum Affectus* Book X.)

The Contents.

The excellency of Blood-letting. I.
When Purgations must be prescribed? II.
The benefit of Diureticks. III.
Sudorifics are not proper at all times. IV.
We must take care to strengthen the parts. V.
Cured in a young Man. VI.

I. **B**lood must be let every day at the beginning, till the Disease and pains abate. Nor is it any matter, if you Bleed for ten or twelve days, or for more; since it is peculiar to this Disease, for the Patient not to be weakened by Bleeding. Therefore it is my custom, when I prescribe Bleeding so often, to add this restriction, that it be continued every day, till the pains be abated, or the strength be much wasted; and when no decay of strength arises upon it, Patients do freely admit it. The condition of the Blood causes this Tolerance, which comes out always very purrid. Experience shews the benefit, since by repeated Bleeding, the Disease, which in its own nature is long, is often conquered in a short time; Besides, a large Hemorrhagy supervening often cures it.

II. Purging in the beginning, increase, and state of this Disease, gives no relief; yea, it does harm; As it happens in all Inflammatory Diseases. But in the declension it is necessary, and must often be prescribed, and with gentle Medicins, that the Cacoehymie, stagnating in the Body, may be carried off. If gentle things be insufficient, wholly to eradicate this Disease, which is often contumacious, we must, if there be no Fever, have recourse to stronger things. I have always cured this Disease, when other things could not do the work, by giving about twenty grains of *Mercurius dulcis* six times sublimed, with ten grains of Scammony or Resin of Julap. ¶ One Clyster made of Emetick Wine cured a Woman of this Disease.

III. In Rheumatick Diseases, when a bad and sharp, ferous Matter, bred by a hot intemperature subservient to Sanguification, is discharged into the External habit of the Body, with a wandering pain of the Bones, and with a sense of heat and heaviness all over the Body, and sometimes also into the inner parts, Diureticks are very good to dry it up; and that by Hippocrates his advice, *lib. de Humor. Do not sput up, says he, the dissolved Humours within, but dry up the superfluous, and when you have a mind to carry them off, or otherwise, it is best to use Attenuants, because so you may more easily purge them by Stool, or by Urine, than if you had restrained them and kept them in by Astringents.* And by Galen's consent, 15. *Simplic. 13.* By Diureticks, says he, the Blood is not only attenuated, but is melted and separated, just as in Milk, in which what is ferous and thin is separated, what is thick is curdled and exactly united.

IV. Sudorifics, as well as Purgatives, do no good, but much harm, in the beginning, increase and state: Ordinary Physicians experience this, who mistaking it for a true Catarrh, and being tired with the contumacy of this Disease, have recourse to these things; whereby the Disease is doubled, and the pains are increased. But in the declension, Generals premised, and when there is no Fever, they do much good.

V. After sufficient Evacuation, yea, at the very time of Evacuation, we must endeavour to strengthen the principal Parts and the whole Body. And these Strengtheners must be cooling, by reason of the hot intemperature of the Liver, the original of a Rheumatism. There is great store of them. I shall propound four, that are very effectual and not ungrateful. 1. Tincture of Corals; two ounces whereof may be taken two hours before Breakfast in the morning, those days when no other Medicins are used. 2. Conserve of Hips, which is grateful to the taste, cools, and with a small astriction strengthens the Liver. 3. *Electuarium trium Santalorum, quadruplicato Rheo.* 4. Tincture of Roses, which things must be used by turns, that Nature may not be used to one.

VI. A young Man was taken with an universal Rheumatism, that seized almost all his joints, with a continual Fever, and great crudity of Urine: He had used Remedies for six weeks; yet the pains ran up and down divers parts, and often returned: He was Bled ten times, he took cooling and in-craffating Juleps, he was gently purged twice or thrice: At length he took a *Bolus* of Conserve of Roses, with *Calomelanos* 20 grains, extract of Julap six grains every third day; he voided much ferous and Phlegmatick Matter. When he had taken this Medicin four times, his Pains were quite removed. Afterwards the Edematous Swellings, which remained in some of his Limbs, especially in his Feet, were dissolved with dissolving and strengthening Plasters.

Ructus, or Belching.

The Contents.

Not always an effect of Cold. I.
A sower one cured with an easie Medicin. II.
A constant one conquered by strong purging. III.

I. **S**ometimes Obstructions are latent in the Mesentery, bred of Crudities in the Stomach, which grow dry and adust, while in process of time, they are by the heat of the Liver, when the moister part is consumed, turned into a Terrene and Melancholick Nature; whence the Belly is bound; there is Belching and painful Wind, which uses to grow worse with hot things, because it partakes rather of the Nature of an Exhalation than of a Vapour; which usually occasions a mistake in many Physicians.

II. Mr. N. had been a long time troubled with sower Belching, and took several things to no purpose, yea, he fell away daily: I told him, his Disease was not so difficult to cure; but that it might be conquered for the value of a Farthing. And I ordered him to swallow five or six whole Pepper-Corns in the morning fasting, five hours before Dinner. When he had done this for three or four days, he felt nothing more of his sower Belching; his Stomach came to him, and his digestion was good; upon which his whole Body appeared to be refreshed.

III. Constant Belching was so troublesome and difficult to one Man, that he seemed to be at death's door, when I was called to him. He had used many Medicins in vain. At first I gave him ten grains of *Rhazes* his *Pilula Iliacæ*, whereby some bad and ferid Humours being purged, he seemed to be better; a few days after he took fifteen grains; and the third time, one scruple. When he had taken this, and had purged the bad Humours, he that lay ready to die confined to his Bed, walked wherever he pleased, and eat his Victuals with a good Stomach.

(See *Ventriculi Affectus* BOOK XVIII.)

A GUIDE TO The Practical Physician.

BOOK XVI.

Of Diseases beginning with the Letter S.

Salacit's, Venus languida, or Leachery and Impotency.

(See *Aphrodisiaca* Book 19.)

The Contents.

Whether Camphire extinguish Venus. I.
The Cure of those that are prone to Venus, who labour under a Cachexy. II.
The use of Cantharides dangerous for provocation. III.
Venus imperfect, because of the thinness of Seed. IV.
Because of an occult Ulcer of the Intestinum rectum. V.
Cooling the Testicles causes effemination. VI.
We may let blood after too much Venus. VII.
Medicines.

I. **A** VICENNA, l. 2. Tr. 22.c. 133. holds that Camphire extinguishes Venus, when he sayes, that Camphire cooles the Seminary vessels, curdles and thickens the Seed and so hinders Coition: Wherefore if it be applied to the Testicles and Loins, it restrains and extinguishes all Venereal provocations. Many subscribe to this opinion. Even the vulgar are come to the knowledge of this, and therefore when they would fatten Swine without Castration they give them a drachm or two of Camphire to eat, and so they extinguish Venus. § Julius Caesar Scaliger Exercit. 104. §. 8. gave a Greyhound Bitch, when she was proud, Camphire in her Meat and Drink, he put some in her Nostrils, and hung some continually about her Neck; he ordered some to be put into her Womb, yet she took the Dog, was with whelp, and brought forth. I can truly say I have tried the same thing more then once. There is in our Neighbourhood a Lusty, Lecherous young Fellow, to whom (that I might show some incredulous Persons their vanity) I ordered Camphire for some weeks in his meat and drink; yet he did not at all leave his loving Nature to the Girls. They that are of the contrary

Opinion build on a false Hypothesis, as if Camphire were cold; and suppose it be so, yet what is the consequence? Both Rue and Agnus castus make Venus dull, yet they are not of a cold temper.

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ni 76, Obs.
231.

II. If they that labour of a Cachexy or Atrophy be prone and strong to Venus, things that are cold and dry, or dry and very hot, must not be prescribed to extinguish Seed. For it does not depend upon the heat or plenty of Seed; but because the Seed is flatulent, by much distending the Member, it makes a show of repletion, and so by dilating the Member, disposes to expulsion, but the flatulencies are caused by a heat, weak through Catochymie: And they that labour under an Atrophy, or sleep ill, do suffer this Symptome. Therefore we must contract the lower parts, and disperse flatulencies, by increasing the Heat, and helping the concoctive faculty of the Liver, Stomach and Veins. And Medicines may be best prepared in form of a Powder, without much Sugar. For Sugar and Honey and other sweet things, lax the Stomach, breed wind, and especially when they are joyned with moisture. Dry leaves of Mint may be given, for then it is an excellent Remedy. For Mint diminishes Seed and strengthens the Stomach with a gentle astriction, and heats, and because Seed makes men bold and courageous, it is vulgarly said, That in time of War Mint must neither be eaten nor sown. Besides, astringent Inunctions should be laid to the Kidneys and Privities, to bind those Parts.

Rondeletius.

III. I have known several, and among the rest two Noble-men, who used Cantharides, the one to gratifie his Whore, the other his new married Wife, but wholly with ill success: For the first fell into a most dangerous pissing of Bloods of which he was Cured with great difficulty: And the other the second day after he was married, died of an Apoplexy.

Ph. Salmuth.

IV. They whose Seed is sharp, are excited to Venus of their own accord, and quickly emit their Seed, or it runs from them, because of its thinness, without any great sense, and the Member becomes detumescent and languid before the second coition, or before the Woman is ready for expulsion. For

A a a the

Rondeletius,
P. 1002.

the Cure, we must neither give things that provoke *Venus*, nor that extinguish it, but such as thicken the Seed and increase flatulency. And boyled Chesnuts, Apples, Rice boyled in Milk, Pine nuts, &c. make the Spirits thick.

V. A certain Nobleman came to me to request a Remedy for his Impotency. He was able to lye with elderly Women, but was insufficient to get a Maiden-head, because at the very first touch he lost his Seed, but it was weak and watry, like whey. He was of a good habit of Body and Fleeshy. I said, because I could not in so healthy a body see any other cause of his Impotency, that I thought he had an Ulcer in the *Intestinum rectum*, and that from thence the *Parastate* and the other Vessels necessary for the preparation and ejaculation of Seed, being continually blasted with a putrid vapor, were not sufficient to breed so much Seed as was sufficient for a long tension of the Member, and a florid coition. While they wondered that I should mention such a cause, I told them I had formerly seen the same case in Italy, and that I remembered I had read of the like in *Hist. Mirab. Marcel. Donati*. I immediately ordered a Suppository only of Honey, and it came out befmeared with much Pus. Then I ordered some brine to be injected by a Syringe, which he said, after several injections, that is, when the Ulcer was cleansed, made him smart much, I judged, when the Ulcer was healed, that he would be well. But he neglected the Cure, and died.

H. ab Heers
Spadac. Obs.
10.

Ph. Salmuth.

VI. I have learned from Soldiers, that while they were led through Rivers, so as that water came up to their genitals, that they were thereby made more Effeminate.

VII. They are not to be harkened to, who after over much *Venus* forbid bleeding. Of which opinion I was formerly, while I follow'd my Masters rules to a tittle, from which I immediately declined, when I began to act my reason with Judgment, and to the great benefit of several, who either immediately, or the next day after coition, have fallen into grievous Feavers and tedious pain in the Kidneys. From whom truly I did not take much less blood, then if Coition had not preceded; taking my Indication rather from the nature of the Disease and its greatness, and from the fulness of the Veins, than from a false opinion of superfluous evacuation. Because the languidness of strength, which follows coition, is not caused so much by evacuation of the sanguineous matter (although Seed be bred of Blood) as from the wasting the strength of the Body by the toil and heat, which necessarily attend Coition. But admit, that not only the vital Spirits, but also the animal and natural be spent sooner and in greater plenty by superfluous *Venus* than by any other laborious exercise of the Body, Whether therefore is there so great an evacuation made of the matter that is in the venous kind, that if Inflammations arise in the Kidneys, which are often caused by too much Coition, blood should not be let, when the said Inflammations are raised by afflux of hotter Blood into the said parts, and the Loins that are heated with too much motion? Certainly no, yea, it ought to be taken away immediately while it is fluid, lest being by long staying fixt to the part it cause an abscess. Nor must we spare Bleeding, if a Feaver take one without pain of the Loins, if the greatness of the Disease require it, since they that are given to *Venus*, for the most part fair high, to enable themselves.

Botalius.

Medicines especially made use of by eminent Physicians.

Against Salacity.

1. Glow-worms which shine in the Night, if they be eaten, take away *Venus* wholly. It is a peculiar

Remedy, if 3 drachms or half an ounce of Coriander be taken with a little water and Sugar.

2. Omitting purging, this Decoction is very much commended, Take of white water Lilly 1 ounce and an half, Purslain, Lettuce, Mint each 1 handful, Rue 3 drachms, seed of *Agnus castus* 1 drachm and an half, flowers of white water Lilly 1 pugil, boyl them in water. To one pound of the Colature add of Syrup of Poppy, of water Lilly each half an ounce, mix them.

P. Forestus.

3. Distilled Oyl of Rue is excellent taken inwardly and applied outwardly, in a few drops.

Hartmannus.

4. The use of Salt Nitre in the water of water-Lilly morning and evening is admirably good, in too great Salacity.

Hofmannus.

5. This is an excellent Remedy; Take Oyl of Roses 1 drachm and an half, Chamomil half an ounce, juice of Nightshade, or Housleek or Purslain half an ounce, *Argenti summa* and Cerus each 2 drachms, a little Wax and Vinegar. Mix them, make an Unguent.

N. Pige.

6. The immersion of the virile Member in cold water makes it immediately fall.

Fel. Platerus.

Against Impotency.

1. Take the Patient's Urine, as much as you please, boyl it in a pot covered, and if anyone have bewitched him, he that did it will be in great anxiety, will discover himself, and take off the Incantment.

Joh. Agrico-
la.

2. If a live Mullet be suffocated in Wine, and a Man drink of it, *Athenus* holds he will be unable to use *Veneri*.

J. Caf. Ba-
ricellus.

3. Take of Mel *Anacardinum*, fresh Butter each half an ounce. Boyl them together till they grow thick stirring them well. The dose is the quantity of a Pease as you go to bed. It excites *Venus* wonderfully.

4. If the right great Toe be anointed with Oyl in which *Cantharides* have been dissolved, it will cause an admirable erection.

P. Bayrus.

5. *Orchis* Root, whose Root is cover'd with a red skin, but is white within, does powerfully excite *Venus* especially given in Wine.

Crollius.

6. The continual use of Essence of Amber is of admirable efficacy in curing Impotency to *Venus*. For there is nothing more effectual for restoring the innate Spirits.

Pet. Joh.
Faber.

7. *Extractum Diasatyrionis* is most excellent in this case, yea and the Extract of the Roots of *Satyrion* itself, if a Pill of it be given is excellent to excite coition.

Rod. & Fon-
seca.

8. Partridges dung dissolved in its Gall, and anointed on the *Glans* does wonderfully encrease *Venus*.

Grulingius.

9. The sperm of a Stag killed in Coition is a great *arcanum* to provoke *Venus*.

Hofmannus.

10. Take of Oyl or Essence of Saffron 8 or 10 drops, a little *Aurum fulminans* well edulcorated, let it be given in Malmsey Wine when the party goes to bed. It strengthens *Venus* to admiration. Essence or Tincture of Salt impregnated with Sol is an excellent strengthener in Impotency.

Cunrad.
Kunrath.

11. Nettle seed boyled in Butter and given for 3 dayes powerfully helps in Coition.

Joh. Mar-
quardus.

12. This is a most effectual Unguent; Take of Oyl of Elder 1 drachm, *Pyrethrum*, *Euphorbium* each 1 drachm, Musk 5 grains, let the Palms of the Hands, the Soles of the Feet, and the Genital be anointed.

Hieron. Mer-
curialis.

13. Nothing is found more effectual than the anointing the Region of the Womb with Oyl of flying Ants, which is thus made; Take of flying Ants two ounces, infuse them in Oyl 40 dayes in the heat of the Sun.

Riverius.

14. This is a Venereal *Arcanum* of great virtue; Take of Civet 2 grains, anoint the *Glans* therewith, It is a wonder with what strength it tickles and erecis

Guern. Rol-
finc.

erefts the Mans member, and with what pleasure to the Woman, that scent is received, so that it is accounted by some as a secret.

15. Hazle Nuts long steeped in Honey are very good for the distension of the Penis. ¶ Also the tongue of a Goose in its whole substance stimulates Venus.

16. This is an admirable Unguent for Coition; Take Oyl of Frogs, Oyl of *Cape canina*, Oyl of winged Ants, *Oleum sesaminum* each 1 drachm, Pyrethrum, Staves-acre, Nettle-seed each 1 drachm and an half, let them be powdered and boyled in the foresaid Oyls; add of Wax what is sufficient. Make an Oyntment; Wherewith the Stones, Reins, *perineum* and *peffen* must be anointed. ¶ If you would render a Woman very delectable, and so as to love you much in Coition, take of *Euphorbium*, Pyrethrum, Cubebs and Pepper each a like quantity, powder them and incorporate them, when you would lye with a Woman anoint the Yard, and do the work.

Salivatio Morbosa, or a morbid Salivation.

The Contents.

Its Causes and Cure. I.

When it is spontaneous, sometimes not to be stoppt. II.

I. **W**E at this time can speak far more clearly and distinctly, then they of old concerning Salivation, since not only the Passages and Vessels that carry the spittle into the Mouth, are known to Anatomists not long ago, but also the parts in which the same is prepared, or separated from the blood, to wit, the Glands, and not indeed the conglobated ones, to and from which Lymphatick Vessels are carried, but conglomerated ones, which are endued with certain ways and ducts, thorough which they pour their liquors, that are useful for the Body, into some determinate cavity. As therefore in the natural and healthy state of Man only spittle is carried from the conglomerated maxillary Glands into the mouth, so oftentimes in his preternatural and morbid state either a pituitous and viscid, or a serous and thin humour is carried along with the Spittle. Especially in these Countries salivation comes frequently of it self, not only to Infants, when they are breeding their Teeth, but to many Scorbutick and Melancholick Persons, who turn great spitters. And I have often seen the same happen in a Thrush. ¶ The Humours that are most frequently evacuated of their own accord by Salivation, are for the most part pituitous, as well the thin as the glutinous. Sometimes also they are acid and salt, for such are easily and intimately mixed with Phlegm, and all these have some affinity with Spittle. But as it happens to many Melancholick Persons, that they void abundance of thin Spittle, and therefore they are called Spitters. So a great many old Men who are full of Phlegm, and that glutinous enough, do in like manner void abundance of Spittle, but thicker and insipid, whereby indeed they suffer some trouble, but no great harm. But there are not wanting some, from whom not only gentle, and almost insipid, but sharp, yea extream sharp hamors, sometimes more fluid, sometimes more tough, run out at their mouth, which not only corrode and corrupt linnen and woollen Cloathes, but any Leather; and every Night for a long time, and for many years most miserably afflict the Patients till their death, and at last are the cause thereof. I have seen several such, and when, to my grief, I never see any of them Cured either by my self or others, although now and then I have given some ease, but

never performed a Cure; and most of them do find sharp Vapours arise from the lower parts, which most miserably rack the Head about the Temples; these cruel rackings are usually attended with the Flux of a most sharp humour out of the Mouth whereby the Gumbs and other Parts about the Mouth, are corroded rather then consumed. And such Persons are seldom eased by Purges, but find more benefit from Anodynes and Narcoticks, and other things, which temper and concentrate sharp humors.

II. And as all the sorts of Spontaneous Salivation are Symptomatick; so I have frequently observed in these Countries Spontaneous Salivations, but critical ones, and such as happily rid the Patients of chronical Diseases. And no wonder, for as all chronical Diseases have their rise from a tenacious, thick, glutinous and viscous Phlegm, or at least have it joyned with their primary cause, and the rise of this same Humour is mostly owing to Spittle, so the evacuation of it with the Spittle seems more easie, seeing when it is joyned with the mass of Blood, it is again separated from it of its own accord, that it may be voided with the Spittle.

Idem, Meth.
Met. l. 2.
c. 13.

Idem, Ibid.

Scabies, or the Itch.

(See Book 8. *Habitus viria.*)

The Contents.

The way of its Original is not one and the same. I.

Whether bleeding be proper. II.

Purging is necessary, and the Indications for Cure. III.

It must not be killed, when the Blood is impure. IV.

The Blood must first be purified. V.

If there be obstructions, they must be removed. VI.

A contumacious one gives way to Sudorificks. VII.

Tet they are not proper for all. VIII.

Cured by Cupping-Glasses. IX.

By an Issue in the right Arm. X.

Whether a Quick-silver Girdle be dangerous. XI.

A pertinacious one gave way to a Mercurial Purge. XII.

Cured by the use of powder of Vipers. XIII.

The Cure of a volatick Itch. XIV.

I. **A**S to what concerns pustulous Eruptions, as the Glandulous humour may be depraved several wayes, so especially these three, and therefore usually falls into a coagulative disposition with the Serum that is newly poured out of the Blood. First of all, the Blood it self being very impure, and also dissolved, leaves its corruption and recrements plentifully in the cutaneous Glands, which there assuming the nature of a more corruptive ferment, do ferment and variously coagulate with other juices that either come thither or pass that way, and so produce not only Itches but several sorts of Leprosies. Therefore often and constant eating of salt Fish or Flesh, and dried in the Smoak or the Sun; also incongruous Drinks and Poysons, do commonly cause cutaneous eruptions, and those often times horrible ones. Secondly, the humour gathered in the cutaneous Glands, sometimes by mere stagnation becomes not only Itchy, but oftentimes Corruptive, wherefore not only they that have been long kept in Prison, but also they that have lived a Sedentary Life, and are used to filth and stink, live obnoxious to these Diseases; inasmuch as the Cutaneous Liquor being not at all eventilated, is corrupted by mere stagnation, and so obtains the nature of a corruptive Ferment, to which moreover an addition of Putrefaction is made by the Blood in like manner depraved.

A a a a

depraved

Sylvius de le
Boe. Appad.
prax. irad.
3. § 306.

depraved. Thirdly, if perhaps these causes be wanting, so as the Glandulous humour of the Skin has contracted no fault neither from the Blood, nor from its own stagnation, yet it is certain that the virulent infection communicated from without, does nevertheless render it prolifick as to these Diseases. This is exceedingly manifest from vulgar observation, inasmuch as they that are best in health, and have as good a Constitution as can be, scarce ever sleep without harm, in the same Bed with an Itchy Person, or where an Itchy Person has lain, nor only so, but Itchy Persons Linnen washed in the same washing with other mens often impart their infection. Certainly the Infection of no one Disease is more easily and certainly propagated (the Plague only excepted) then this of the Itch.

Willis.

II. Whether is Bleeding convenient? The Conciliator answers affirmatively, but with a limitation, that is, when the matter of the Itch is yet contained within the Body; for when the matter of it is blood mixt with sharp humours, it follows that bleeding is a convenient Remedy. Besides the effect is not taken away till first the cause be removed, which may this way properly be done. Yea, for an Universal Disease, such as the Itch is, an Universal Remedy, such as letting Blood is, seems convenient. But when nothing more of the peccant humour is in the Veins, there is no need of Bleeding. Distinguish therefore between the Itch that is already come, which is not increased by any further afflux of matter, and one that is but in coming.

III. Two primary Indications occur concerning the Cure of the Itch; The first Curatory, which respects two things, That the Glandulous humour (its corruptive ferment being utterly extinct) may be reduced to a right temper. Secondly, that the Pores and passages of the Skin being freed from the Ichorus Concretions, may recover their former strength and thorough passage. The second Indication, which is Preservatory, has a care of two things; First, to prevent the Impurities and Corruptive Infection of the Itch, as they fall from the Skin (while the ferment is in subduing) from regurgitating into the Blood and Nervous Liquor, and not only from causing disorders in them, but moreover (as it is often usual) from bringing some more grievous mischief upon the Brain and Heart; Secondly, to endeavour that the Infection of the Humours and noble Parts first contracted from the Itchy matter, while the faults in the Skin are amending, may be eradicated. All these intentions of Cure may be complicated together, by using inward and outward Remedies both at once, or they may be used first one and then another; namely, that the Morbifick matter being defeated, may not be able to run any whither and lye hid in any hole, but may totally be removed out of every corner by Medicines aimed at both inwardly and outwardly. Therefore Purges ought both to begin and make an end of this method of Cure. Although *Helmont* treats a Cathartick Medicine with high disdain, and as it were leads it in Triumph, because of it self it does not Cure the Itch: yet we may affirm, that this Disease is scarce ever easily, but never safely Cured, without this sort of Physick.

Willis.

Borellus,
Cent. 2. Obs.
92.

IV. A certain man, who was troubled with an exceeding Itching, washed his Body with an infusion of Sublimate: but within a few hours there were Blisters raised all over his Body: in a little while after he was so troubled with faintings and swoonings, that he was very nigh death, but being rubbed with Cordial things, he escaped. ¶ A Monk neglecting Universals, killed the Itch with Oyntments, presently upon which defluxions of Salt Humours supervening, and falling upon his Lungs, he spate Blood at times, and at length an

Hætick coming upon him he died. When he was dead his Lungs were found altogether corrupted, and most of them hardened into a *Scirrhus*. *Velchius Obs. 65.*

V. He that would Cure the Itch, must first of all cleanse the Blood; for it lodges in the Saline, Vitriolate, and Aluminous impurities thereof. And *Mercurius dulcis*, and *Vite*, *Arcanum Corallinum*, *Extractum Panchymagogum*, and the like exterging things perform the Cure. *Hartmannus.*

VI. But if there be any Obstruction, it must first be removed before you purge, without which an inveterate Itch will scarce give way. *Idem.*

VII. If the Itch be contumacious and itch very much, sweats happily Cure it, given for 20 dayes one after another, raised with the white, fixt flowers of Antimony, in a decoction or spirit of *Guaiacum*. Thus I cured a student in Physick, and a certain *Bohemian*. *Idem.*

VIII. Yet we must abstain, if the affection come from a hot and dry intemperature of the Liver, for by the administration of hot things it grows more effervescent, a greater aduotion of atrabilarious humours succeeding. A certain Student being troubled with a dry Itch all over him, whose body was of a hot Constitution, by the use of this decoction; Take of *China*, *Sassa parilla* each 6 drachms, wood of *Sassafras*, roots of *Rhodium*, *Cichory*, *Scorzonera* each 1 ounce, infuse them in 12 pounds of water, boyl half away, was so inflamed all over his Body, that he was forced to desist from his Cure. Besides I have observed as bad an event of Cure in other Itchy Persons, and them that were troubled with the *Lepra Græcorum*, although so great an excess of hot things were not committed. *Augustinus Thonerus, Obs. 3. l. 4.*

IX. A Senator of *Ulm*, while he tarried at *Geneva*, was infected with the Itch, by the advice of the Physicians 18 Cupping-Glasses were set at one time to divers out parts of his Body. When *Mr M Muller* was infected with the Itch, while he lived at *Venice*, 24 Cupping-Glasses were by the advice of his Physicians applied to him, and both of them were made free of their nastiness with good success. But though these Cures succeeded according to desire, nevertheless if any Physician should attempt to go upon such a process of Cure among us, he must never expect, that his advice would be followed. *Idem, Obs. 2.*

X. When I could Cure the Itch in the hands, especially in the right, by no Medicines, I took it away by making an Issue in the right Arm. *Glandepius.*

XI. Empiricks make a Girdle two inches broad of a list of Cloth, anointed with crude Mercury killed the vulgar way, and Hogs-lard, to be girt about the naked Loins, for them that are infected with the Itch, and who would in their Travels be free from Lice. A lusty Matron of about 40 years old, fat and of a moist constitution of Body, when in the Month of *February* she had put on such a Girdle for a small Itch, and had worn it for three Weeks night and day, she indeed was rid of her Itch, but there followed a Salivation, exulceration of the Gums, heaviness in the Head, which was followed by a Catarrh upon the left side, and a weakness of the same. It is certain this Disease came through the abuse of Mercury, which carried the Humours from the lower parts of the Body to the Head. *Hildanus, Cent. 5. Obs. 93.*

¶ But *Petræus* in *Nosolog. Harmonic. tom. 1. p. 395.* says, that Mercurial Unguents may be safely and successfully used in a contumacious Itch, if Universals be premised and the unprofitable and hurtful juice be exterminated the Body, yet such Topicks must not be made up of a mass of infinite Medicines, for so they will work with better success and quicker effect. These Mercurial Medicines rightly prepared, and outwardly applied, are so far from hindring Nature's motion, that they rather precipitate the verminous, putrid, salt and briny humours, which is the reason why of Mercury Sublimate and live Mercury, there comes *Mercurius dulcis*, because

because it has a virtue of changing the temper of, precipitating and also edulcorating corrosive Salts. And if any Symptomes arise at any time, they do not so much proceed from the Mercury, as from the mass of ill Humours, and Remedies applied amiss. Therefore Th. Bartholinus his Countrey Fellow cured all them with his Girdle, that had got their Bodies clear by the frequent use of Medicines, but he could not save the Cacothymick from death. This Rustick tempered Mercury with distilled Oyl of Juniper, and made it into a Mass, he spread it on a Girdle, and commended it for all Malignant affections, Cancers, malignant Ulcers, and Pains in the Limbs. In some places it is a Custome to mix Arcanum Corallinum with Oyntment of Roses in the Pox, and they account the same an Arcanum in a contumacious Itch.

XII. A filthy Itch troubled a young Man, with felons frequently breaking out, of which Ails he could not be cured by Bleeding and several Purges for Six Months time. At length I gave him 1 scruple of Mercurius dulcis, with half a scruple of Diagridium, which purged him very well, and within a few dayes he was clear.

XIII. A Reverend Father had contracted a filthy Itch all over his Body for 5 or 6 years, for which he had tried infinite Medicines to no purpose. I in so contumacious a Disease used only the Flesh of Vipers: sometimes he eat them boyled in water with a little Salt, and drank the Broth after them: sometimes he had them baked and turned to a Powder, which Powder he used with his Meat, together with Sugar, Cinnamon, or other things. In the whole Summer he eat above 160 Vipers: Whereby his Skin was renewed, and he became wholly, as it were another Man: And he that once appeared a very old Man, became as it were, young again, that is stronger then usual, and fitter to do any business. The use of Vipers is scarce ever beneficial under a long time.

XIV. There is a sort of Itch, which Fallopius calls Volatick, because it seems to fly all over the Skin: It has been certainly observed that one has overrun the whole Body in one Night. It is usually accounted by Physicians for an Efflorescence of the Blood. How truly the Cure does show, which they are so far from Curing, that on the contrary the Evil has grown stronger and stronger to death, refusing all Medicines. In this case, necessary purges and sweats being premised, there is a desired Secret in the Blood, which comes just after delivery from the Womb, together with the after-burthen, where all, or only some part of it, if namely the place affected be washed therewith. This Remedy is of so great efficacy, that it is seldom necessary to repeat it, and presently the volatick Itch falls off dead. I have with this cured infinite People, who have been infected with a dangerous Itch. Unctions are here not at all convenient.

Medicines especially made use of by eminent Physicians.

1. This is very proper, which I experienced in a young man, who had a great inveterate Itch, and very rough about his Legs, which reached from his Knees to the tip of his Toes; Take Linseed, beat it with water, lay it on thick, and use it constantly.

2. An excellent Oyntment of Salt of Saturn against the Itch; Take of Sal Saturni 1 ounce, Mastich half an ounce, Allum 1 drachm, Oyl Olive what is sufficient. Mix them, make an Unguent. It quickly heals and dries up the Itch.

3. The Itch is easily and pleasantly cured with this. Take of Oyl of Ben 3 drachms, Spirit of Salt half a drachm, Musk 2 grains, Wax what is sufficient. Make an Unguent.

4. A wonderful Oyntment for the Itch; Take of Turpentine washed in Rose water 3 ounces, Oyl of Roses 6 drachms, the juice of 3 Oranges, the Yolks of 3 Eggs. Make an Unguent; it has been experienced in an old and dry Itch; It may also be allowed to be admirable, because it expells the Itch by Urine, and makes a Man piss black Urine every Morning.

5. Take of live Sulphur 2 ounces, Gum Juniper, which Bookfellers use, root of white Hellebore powdered each 2 drachms; juice of Spurge, Oyl of Linseed each 1 ounce. Beat what should be beaten very fine, boyl them over the fire into the form of an Unguent, and strain them out, cast away the dregs, and keep the rest for use. After Bathing anoint the Hams, the inside of the bending of the Arm, the Palms of the Hands and Wrists, under the Arm-pits and Soles of the Feet, rubbing those places with store of Oyntment, and then go into a warm Bed for an hour or two, and let him be anoynted 3 times every other day. I have experienced this Itch in the worst old Itch that could be.

6. This is an excellent Remedy for the Itch; Take Salt of Tartar purified with Spirit of wine, and dissolved in a Cellar, joyn it with Sal Ammoniac and it cures the Itch. If it be mixt with the Tartar till it grow red, it will become more effectual to cure the Itch.

7. Take of green Elecampane half a pound, Hogslard 5 ounces. Beat them together, Boyl them on a gentle fire. Make an Unguent, with which the Pustules may be anointed. This Unguent is of admirable vertue, so that it operates like an Incantment.

8. When a certain Matron laboured of a contumacious Itch, which she had contracted by Contagion, I ordered her to take the small twigs of Birch (in defect of the leaves) and cut them into short pieces, but to hew the greater boughs into chips, and to boyl Bark and all in such a quantity of water, as that she might sit in a Tub full of it, up to her Neck, wherein I mixt 2 parts of crude Tartar and one part of Nitre; with which by God's blessing, after her Body had been first well prepared, she was wholly delivered from her Itch.

9. Whey, especially of Goats milk is in this case very useful, which indeed in a moist Itch may be given at first with 2 ounces of juice of Roses, that it may both purge and then for 4 or 5 dayes attenuate. If the Itch be dry, 2 or 3 ounces of juice of Fumitory may be added, or also 2 ounces of an Emulsion of Melon Seeds, which way it is a most efficacious Medicine for the Scab and Itch.

¶ This is an experienced Medicine in any Itch; Take the root of sharp-pointed Dock green, of Elecampane green each half a pound, Hogslard 3 ounces, beat them in a Morter, boyl them a little on a gentle fire, then strain them out violently, and make an Unguent.

10. This is a most excellent Oyntment. Take of the inner yellow rind of black Alder 3 handfuls, fresh Butter 1 pound, the best Wine half a pound. Boyl them to the Consumption of the watry part, strain it violently through a linnen Cloth. Keep it for use, it Cures the Itch admirably, especially in the younger sort. But the Body must first be well purged.

(Scorbutus,

Scorbutus, or the Scurvy.

The Contents.

- Northern People alone are not subject to it. I.
 Blood must be taken but in a small quantity. II.
 When the Spots appear, a Vein may be bled. III.
 Purging must be seldom and gradual. IV.
 Things that act by a Specifick virtue must be used. V.
 Their Heat and Acrimony must be corrected. VI.
 The Juice of Plants is to be preferred before Decoction. VII.
 Its Cure differs not much from the Cure of Hypochondriack Melancholy. VIII.
 Sugared things do harm. IX.
 Many Diseases are taken for Scorbutick, which are not so. X.
 The preservatory Method in a Salino-Sulphureous dyscrasy. XI.
 In a Sulphureo-Saline. XII.
 Of the Curatory Method for the Scurvy, whereby we oppose the Disease and the most urgent Symptomes. XIII.
 Of the vital Indication, wherein are Comprehended Cordial Medicines, Opiates, and Diet, requisite in the Scurvy. XIV.
 Medicines.

EXperience has taught us, that our Country does not altogether want the Scurvy; for although it be not attended with all the Circumstances, which are reckoned up by Northern Authors, yet it affords some Symptomes, which are sufficient to establish its nature, many whereof we have observed in several Patients. 1. The first and most evident sign, the affection of the Mouth, Gums, and Teeth: In the Gums there is a redness, itching, putrefaction, bleeding, and stinking smell: which affections are sometimes communicated to the jawes and palate; and also to the Teeth, which are found loose and black. 2. Spots coming in the Arms and Legs. 3. Difficulty of breathing and straitness of Breast, by gross Vapors coming to the Diaphragm, and by the swelling of the *Pancreas*, that is filled with some thick humour. 4. A spontaneous lassitude, and heaviness of Body. 5. Various Urines, sometimes thick with a red and thick sediment, without any suspicion of the Stone; sometimes thin. 6. A weak and unequal Pulse, and almost fornicating. 7. Pains seizing several parts of the Body, sometimes the Loins, whence it is sometimes called *Lumbago* by some. 8. Divers hurts of motion, so that sometimes a Palsie arises, sometimes Tremulous and Convulsive motions. 9. A Flux, simple, or bloody. 10. A stinking Breath. 11. Frequent shivering, not attended by any Heat. 12. Agues far differing from the Characters of common Agues. 13. Swellings in divers parts of the Body, sometimes hard, sometimes soft. 14. Extreame Atrophy.

Rivarius.

Sennertus.

II. This Disease, as *Galen* advises, admits not of plentiful Bleeding. And if this Disease have taken root, and there be a great corruption of the Blood and Cacochym, with no abundance of Blood, and if it hath seized the whole Body, so as that already break out, and other external Signs appear in the Body here and there, bleeding must not be ventured on, lest the more pure and subtil Blood running out, and the more viscid and thick remaining in the Veins, the Patient's strength be weakened: But we must then rather fall on preparing and evacuating the Scorbutick Cacochymic.

III. Many reckon it an unpardonable mistake to let Blood in Scorbutick Spots, being only intent upon Anti-scorbuticks, because of the Scorbutick malignity, which is held to exclude this generous

Remedy. But although Blood-letting be not proper for a Scorbutick Malignity of it self: yet I do not see why, in the beginning, while strength is yet good, and while the Disease has not as yet Infected the whole mass of Blood, a Vein may not be bled in the Scurvy by accident, as well as in other Cacochymies; to the end, that part of the ill Blood being taken away, the Body may be relieved, and so the remainder may more easily be brought under and conquered; especially since Nature shows the same, who sometimes in the Scurvy pours out Blood not only by the Hemorrhoids and *Menses*, but also by other Veins, as by the Nose, Feet, &c. Nevertheless, this Disease admits not of large Bleeding, but a repetition of it is best, in several places, thrice at least, but at some dayes distance.

Frid. Hoffmannus, m. l. i. c. 12.

IV. As for preparation and purgation, since the Scurvy will not bear strong purgatives, but is rather exasperated by them, as *Eugalenus* informs us, and all learned Physicians, being so taught by experience, testify, that the bad Humours cannot be evacuated all at once, Gradual purgation is the best to be insisted on, so, to wit, that the matter may first be prepared and concocted, and the corruption and putrefaction of the Humours may be conquered and restrained, and then gentle purgation may be made. And seeing the Scorbutick matter is not all of the same substance, but is mixt of divers humours, we may again come to preparation, and then, if there be need, the prepared Humours may again be evacuated by fit Medicines. But if this should not be observed, and purgatives should be given, while the matter were crude, and the specific corruption of the Humours not as yet conquered, the matter being moved and disturbed would produce great anxieties. Yea, it has been observed, that several have recovered without the use of Purgatives, by using of attenuating and inciding Anti-scorbuticks.

Sennertus.

V. It is not for nothing that *Eugalenus* informs us, that several times Physicians, otherwise learned, have laboured in vain in curing this Disease, which they understood not rightly, who without doubt used both aperient, alterative, evacuating and strengthening things, but in vain, because they understood not a Scorbutick Cacochymie. For all aperients and alteratives of the Melancholick Humour, are not here sufficient; but such things must ever be used and mixt withal, as respect the nature of this Humour.

Sennertus.

VI. Since divers other Humours abounding in the Body may be mixt with the crude and gross Humour, that is the cause of the Scurvy, and they oftentimes choleric and hot, and since the Humours detained in the *Hypochondria* do as it were ferment, and grow hot, we must have a care, that we exasperate not the Evil by over hot Medicines, especially in more Southernly Climes, where the Melancholick humour is adust and approaching to the nature of black Choler: Therefore such Medicines are not improperly given in Whey.

Idem.

VII. Authors do well caution us about Medicines proper for the Scurvy, that there is greater efficacy in Juices than in Decoctions, which experience testifies. For they have their efficacy from a volatil Salt, which is dissipated by boiling, and for the most part vanishes in drying: But in Juices and Conserves it remains in a manner intire. Much less should Extracts be preferred: For although no unprofitable ones may be prepared out of some Plants; yet since their virtue chiefly consists in a volatil Salt, it cannot be, but it must be wasted: For this Salt unites it self with Spirit of Wine, or with whatever other Liquor is used in the Extraction, and flies away with it, and so the Body is left destitute of this Salt, and in a great measure ineffectual.

Hoffmannus.

VIII. The same Cure must be insisted on in this Disease, as in Hypochondriack ones, seeing it is bred of the same humour, but further receding from a natural state. Therefore for the most part it stands in need of more powerful Remedies.

Riverius.

IX. All sugared things are enemies to Scorbutick and Hypochondriack persons; and therefore let us abstain from the use of them; for not only as they lye in the *Hypochondria* of Scorbutick Persons, they turn into dross near akin to Salts, but according to *Celsus* l. 4. c. 9. they are enemies to the Spleen, for they move bile, ferment the Humours and breed Obstructions in the Bowels. And by the use of them, according to *Hippocrates* *ἡσυχία καὶ μέλας γίνεται ὁ σπλῆν*, that is, the Spleen is swelled and made great. Wherefore both *Dornrellius* *presat.* *Dispenfat.* and *Greg. Hofstius* l. 7. *Observat.* forbids them Scorbutick Persons.

Mœbius, In-
stit. p. 522.Hofmannus,
m. p. 348.

X. I will tell you freely, that although I do not question, but the Scurvey is truly found in these Northern Parts, yet I am verily perswaded, it does not so frequently occur as is commonly believed: And that many (not to say most) of those Diseases, on whose account we blame the Scurvey, are the effects of Diseases, that are in breeding, but not yet bred, and which have not as yet put on any certain type, or the unhappy reliques of some Disease that is not as yet wholly conquered, whereby the Blood and other Humours are tainted; for example, In what bodies any matter, apt to produce the Gout, is newly bred, but not as yet fallen upon the Joynts, divers Symptoms will show themselves, which will give suspicion of the Scurvey, till a Gout now formed, and actually exerting it self, leave no room for further doubting. What I have said of the Gout, I would have understood of the Dropsie, concerning which Disease although it be vulgarly said, Where the Scurvey ends, the Dropsie begins, yet this rule must very often be no otherwise taken, than that as soon as ever the Dropsie shows it self by manifest signs, then the pre-conceived opinion of the Scurvy immediately falls to the ground. The same may be said of very many other chronical Diseases, which are but growing, and which therefore have not formed themselves any type, or of them also, which although they be partly got away, yet they seem not to be wholly conquered and exterminated. And indeed, unless we allow this, the name of the Scurvy, as it now goes, will encrease vastly, and will serve for almost all Diseases. Whereas if we would make it our business, to search narrowly into the inwards of every Disease, and bring it from behind the Veil of irregular Symptoms, it would presently show its nature, and might easily be placed in that family, to which it belongs. And the method whereby such Diseases should be driven away, ought not to be accommodated to these counterfeit Symptoms, but to the Disease it self, whatever it is, as perfectly formed, and then actually existing.

Sydenham.

XI. As for the Cure of the Scurvy, since not only one simple preternatural affection; but a legion of such must be forced away; therefore the method of Cure ought to touch upon manifold Indications, and those variously complicated, and subordinate, which yet I have thought good after the vulgar manner to reduce to these three heads, namely as they are preservatory, which respect and remove the cause of the Disease, and Curatory, which remove the Disease it self and its Symptoms, and lastly vital, which maintain and restore the strength and Spirits of the Patient. At the beginning of the Cure we ought to aim at the cause of the Disease; for when it, like the root, is cut or pulled up, presently the stock, boughs and fruit wither away. Since therefore we have shown that the cause of the Scurvy is founded upon a Dyscrasie in the Blood, to wit, either Sulphureo-Saline, or Salino-Sulphureous, we must do our endeavour, that

the Dyscrasie of either nature may be amended:

To this purpose, First, Impediments must be removed, and then the Primary intention must be put in execution, for both which ends Remedies are taken from Diet, Surgery and Pharmacy. As to Diet, a special course of it shall be appointed below; in the mean time we will proceed to the rest. The reduction of the Blood to a due temper by appropriate Medicines is especially hindered for these two reasons, that is, First, because it is continually furnished with a store of bad nutritious Juice; Then Secondly the recrements that are bred in it, are not sufficiently voided by the proper emunctories. There we must take care that the work of Chylification may be performed aright in the first wayes, then that the vaporous recrements may be purged away by Transpiration, the serous by the Kidneys and Lymphæducts, the bilious by the Gall-bladder, the atrabilarious by the Spleen, and others of what kind soever they be, by their proper emunctories. Then, when these offices are rightly performed, we must endeavour to reduce the Dyscrasie of the Blood, by specifick Medicines, and especially such as have a volatil Salt in them. The Remedies that respect each of these intentions may be complicated together, and ought to be used both at once, but in what manner and modes of administration, we must yet more particularly show.

1. We must have a care that Chylification be rightly performed in the first ways, that the load of Excrementitious matter gathered there may be cast off, that the destroyed or depraved ferments may be restored, that the passages and pores that are any ways stoppt or obstructed, may be opened. To these ends Cathartick, digestive and aperient Medicines are designed. 2. That the excrements gathered in the mass of Blood, when they are not sufficiently discharged by their proper emunctories, may now and then be carried off by other ways, most convenient. For this matter Catharticks, Diaphoreticks, and Diureticks are convenient. 3. That the Scorbutick Dyscrasie of the Blood may be amended by Phlebotomy and Specifick Remedies. Wherefore that the whole of preservatory Indication may be reduced in short, I shall comprehend the Pharmaceutick apparatus in narrow terms, that is, as it consists of Catharticks, Digestives and Antiscorbuticks, to which Phlebotomy may be added, as there shall be occasion. And I shall give some forms or prescriptions, and also the manner of using them. If the Stomach (as it is usually) being loaden with a sower or nidorous viscid matter, have an inclination to throw off the filth thereof by reaching and vomiting, and if the Patient have been able formerly to bear such evacuation well enough, nothing hinders, so the strength be not too much wasted, the giving of a Vomit. To the stronger an infusion of *Crocus Metallorum*, or *Mercurius vitæ*, or *Tartarus emeticus* *Nynsichti*, or *Sulphur Antimonii Glauberi* may be given. They that are of a weak constitution, and tender, may take *vinum scilliticum*, or *Gilla Theophrasti*; upon which given in a small dose, they may drink a large quantity of whey, and when the Stomach is filled till they reach, they may put their Finger or a Feather in their Throat, and they will vomit easily, and it may be repeated as often as they list. By this way of vomiting, the mere contents of the Stomach, being cleansed from its folds, are discharged: nor are painful or convulsive twitchings, or swooning (which are usually caused by Stybiates) raised in the Bowels thereabout, or in the Membranes. I have advised them, whose Stomach because of bad digestion, easily gathers a load of Phlegm or of some other degenerate matter, (and often with good success) to take such a Vomit once a Month, as being both safe and wholesome. Where there is no room for a Vomit, we must begin with purging; at least after the interposition

of a few days this evacuation must succeed the former. What is commonly inculcated by Authors concerning preparation of the Humours, I either reckon it needless, or, the circulation of the Blood being not understood, wholly erroneous: but instead of this intention, things that restore the ferments of the Bowels, and alter the frame of the Blood, may be used in their stead: so as in the mean time the filth of the first ways, and the recrementitious superfluities of both the Sanguineous and Nervous Liquor may be discharged; First a gentle purge may be given, and afterwards according to the strength of the Patient it may either be repeated once a Week or oftener or seldom; and the strength of the Medicine may be proportioned according to the success of the first Dose. If the constitution of the Patient be hot, and the Scurvy appear to be founded, in an adult, that is, a Sulphureo saline Dyscrasy of the Blood, all aloëtics and diagrydiates must be avoided, and only more temperate Medicines made of *Senna*, *Rheubarb*, and such like, which do not disturb the Blood and Humours, must be given. For Pills, Take of leaves of *Senna* 1 ounce, *Rheubarb* 6 drachms, *Dodder* of time 3 drachms, Root of *Polypody* of the Oak, English *Rheubarb* dried each half an ounce, yellow *Sanders* 2 drachms, *Celtick Spike* half a drachm, Salt of *Wormwood* 2 drachms. Being shred and bruised, let them be digested in a body in sand with White wine and Fumitory water each 1 pound (or with 2 pounds of our magisterial Antiscorbutick water) for 2 days, let the clear colature be evaporated in a gentle heat in *Balneo*, to the consistence of Honey, then add of the powder of leaves of *Senna*, *Rheubarb* each 1 drachm and an half. *Species diatriæ Santalæ* 1 drachm, Cream of Tartar 1 drachm and an half. Make a mass for Pills. The dose from half a drachm to a whole one. Or such an infusion may be made, and evaporated with a gentle heat to the consistency of a Syrup, adding towards the latter end of clarified Manna and whitest Sugar each 2 drachms. Make a Syrup. The Dose is a spoonful or two in some convenient vehicle. Or 4 or 6 drachms of the said Tincture may be given for a Dose, adding cream of Tartar half a drachm, and if it want sweetning, Syrup of Apples 3 drachms. Or 6 drachms of pickt *Corinths* may be put in the foresaid Tincture, let them be digested hot, till the *Corinths* swell, which being taken out, the Liquor may be evaporated to the consistency of a Syrup, adding of Sugar and clarified Manna each 1 ounce and a half. Then put in the *Corinths* again, and keep the Medicine in a Glass bottle well stoppt. The Dose is a spoonful or two. Or, to the foresaid Tincture evaporated half away add of fresh *Cassa*, Pulp of *Tamarinds* drawn with antiscorbutick water each 3 ounces conserve of *Violets*, *Damask Roses* each 2 ounces. *Pulvis sennæ compositus major* 1 drachm, powder of *Rheubarb* half an ounce, Cream of Tartar, *Species diatriæ Santalæ* each 2 drachms. Let them be well mixt in a Mortar till they be reduced into the form of an Electuary. The Dose is about the quantity of a Walnut, more or less, according to the success in Operation. They whose queazy Stomach does not admit Medicines, but in a small quantity and an elegant form, may take this; Take of Refine of *Scammony* from 4 grains to 8, Cream of Tartar half a scruple, *Celtick Spike* 6 grains, mix them, make a powder. Give it in a spoonful of *Panada*, or make it into Pills. If they that are sick of the Scurvy, be of a cold constitution, and the Disease appear to be founded in a nitro-sulphureous disposition, like roapy Wines, sharp Catharticks and such as have hot particles may be given them; Take of *Pil. Stomach. cum Gum.* 2 drachms, refine of *Jalap* 20 grains, *Tartarum vitriolatum* 16 grains, Oyl of *Juniper* half a scruple. With a sufficient quantity of Gum Ammoniac dis-

solved in *aqua lumbicorum* make 16 Pills. Take 4 at a time, once in a Week. Or, Take of *Pilul. Tartar. Bontii* 1 drachm and an half, Resin of *Jalap* 12 grains, Salt of Tartar half a scruple, with a sufficient quantity of *Syrupus Augustanus* make 12 Pills. Or, Take of *Extract. Pil. Ruffi* 1 drachm, Extract of black Hellebore 1 scruple, Salt of Tartar half a drachm, with a sufficient quantity of Gum Ammoniac dissolved, make 9 Pills. Take 3 for a Dose. Take of leaves of *Senna* 1 ounce, *Rheubarb* 6 drachms, *Mechoacan*, *Turbith*, Gum, each half an ounce, fibres of black Hellebore 3 drachms, Salt of Tartar 2 ounces, yellow *Sanders* 1 drachm and an half, *Winter bark* 2 drachms. Being shred and bruised, let them be digested in 2 pounds of white Wine for 2 days. Make a clear colature without expression, and either let 6 ounces of it be taken by it self, or let it be reduced into an Extract, or Syrup, or Electuary as the Tincture described above, adding of *Pulvis Arbuticus* or *Diasenna* a sufficient quantity, &c. Or, such a Tincture as this may be made, which may be given to strong men, to the quantity of a spoonful or a spoonful and an half; Take of Salt of Tartar 1 ounce, small Spirit of Wine 1 pound and an half. Let them be digested till it grow yellow, Then when it is poured off the dreggs, infuse therein of leaves of black Hellebore steeped in Vinegar 1 ounce, yellow *Sanders* 1 drachm, the yellow rind of Oranges 1 drachm and an half. Make a hot and close digestion for 3 dayes. Let the clear colature be distilled in *Balneo* to half, and let the remaining Liquor be kept for use. Or, Take of the root of sharp pointed Dock, *Polypody* of the Oak, Nettle, Chervil, each 6 drachms, leaves of Eupatory, Speedwell, each 1 handful, *Sanders* white and yellow each 1 drachm and an half, *Carthamus* 1 ounce, Tartar of white Wine half an ounce, boyl them in 2 pounds and an half of Spring-water to half. Add of Rhenish wine 1 pound, and let it be presently strained, To which put of the best *Senna* half an ounce, *Rheubarb* 6 drachms, leaves of black Hellebore half an ounce, the yellow of Oranges two drachms, Make a close and warm infusion for 12 hours. Let the Colature be kept in a Glass stoppt. The Dose from 5 drachms to 6. Within 4 or 5 dayes they may be repeated, as occasion shall require. Too often and violent purging destroys the strength, spoils the Bowels, and in the mean time removes not the Disease.

After once or twice purging, if bleeding be indicated, let it be done in the Arm, or in the Hemorrhoid Veins by Leeches: It is not much matter which Vein is opened, for the opening of the *Salvælla* is not of such moment, as is commonly believed. All the tedious controversies among Authors about bleeding the Jecorary, or Cephalick, or any other, which should be best, are at an end, since the Circulation of the Blood is known. Phlebotomy is indicated by the plenty and badness of Blood, which it is better to take away in small quantities at several times, than to take a great deal at once. For when the Sanguineous Liquor becomes very impure, it is more certainly amended by no sort of Remedy, than by letting of it often and in a small quantity: because as often as the old corrupt Blood is taken away, new, which is better and more pure succeeds. In the interim care must be had, that it be not taken away in too great a quantity at once; for when its store is hardly diminished, sanguification fails, so that a Drop-sie or Cachexy follows.

Therefore since the greatest pains in Physick should be bestowed upon eradicating the cause of the Scurvy especially and upon its own account; for this end, moreover Digestives and Specifick Remedies, or Antiscorbuticks, as we intimated but now, must be used at all times, except the purging dayes, to which, if there be need, Diaphoreticks or Diureticks may be added. There are

are in Authors many sorts of Receipts of Medicines, that perform these Intentions. I have a mind here to recite some of the choicest, which I have thought good to distinguish into two Classes, according to the twofold nature of the Scorbutick cause, namely, the Sulphureo-Saline, and the Salino Sulphureous Dyscrasie; and first of all, I shall treat of those that are proper for the latter sort of Distemper, that is, where need is of Medicines endued with a certain incitation, and very full of volatile Salt.

Digestive Remedies, which restore the ferment of the Stomach, and help the functions of it and other parts serving for chylicification; and Antiscorbuticks or Specificks, which remove the Dyscrasie of the Blood, are either joyned in the same composition, or at least are taken successively on the same day. Among Digestive Medicines there are justly reckoned, Cream of Tartar, salt and tincture of Crystal, *Tartarus Vitriolatus*, *Chalybeatus*, *Elixir proprietatis*, *Mixtura simplex*. The use of any of these twice aday does much good. Moreover, you may easily mix magisterial Tinctures and Elixirs, of divers sorts, both digestive and appropriate to the Scurvy, with the two following *Menstrua*; Take of rectified Spirit of Vitriol 6 ounces, alkalifate Spirit of Wine 16 ounces. Mix them and distill them in a Glass retort, with 3 Cohobations. Keep it for use in a Glass well stopp'd. *Elixir proprietatis* is better made and more easily, with the said *Menstruum*, than the common way. Take of Winter Bark, *Lignum Aloes*, lesser Galangal root each 2 drachms, Cinnamon, Cloves, Cubebs each 1 drachm, Seed of Bishopsweed, Creffes each half a drachm. When they are bruised pour on them the foresaid *Mensstruum* till it stand 3 Inches above. Digest them in a body in a sand Furnace 6 dayes. Keep the Colature in a Glass well stop't. The Dose is 20 drops in Canary or some proper Liqueur, twice a day. Take of the whitest Amber, Gum Ivie, *Caranna*, *Tacamahaca*, each 1 drachm, Saffron half a drachm, Cloves, Nutmeg each 2 scruples. When they are bruised pour on them the foresaid *Mensstruum* and draw the Tincture according to art. The Dose is 20 drops as before. Take of blew Salt of Tartar 4 ounces, digest it in a body with 1 pound of Alkalifate Spirit of Wine to the extraction of the Tincture. This may be another *Mensstruum*, with which you may make Elixirs out of Gums, Spices, &c. in the same manner as you did with the former *Mensstruum*.

While these sort of Medicines are given Evening and Morning, another sort of Medicines that are Antiscorbutick must be given at medical hours, that is, at eight before noon, and four after, which for the most part we give in a solid and liquid form together, taking the solid first and drinking the liquid upon it. There are several forms and compositions of both sorts.

ELECTUARIES.

Take of conserve of Scurvy-grafs, Roman Wormwood, Fumitory, each 2 ounces, powder of Winter's Bark, root of Angelica, Wake Robin each 2 drachms, *Species diatrium Santalon* 1 drachm and an half, powder of Crabs Eyes 1 drachm, salt of Wormwood 2 drachms. With a sufficient quantity of Syrup of Citron rind make an Electuary. Take of the Conserve of Scurvy-grafs leaves, Brooklime, made with an equal quantity of Sugar, each 3 ounces, Troches of Capers, of Rhubarb, each 2 drachms, salt of Wormwood, Scurvy-grafs each 1 drachm. With a sufficient quantity of Syrup of Juice of Scurvy-grafs make an Electuary. I usually prescribe Conserve of the outer Peels of Lemons and Oranges, of the purple flowers of the Ash-Tree, of the flowers and leaves of Lady-smock,

of the root of sharp pointed Dock and English Rhubarb, made with an equal quantity of Sugar, which being mixt either among themselves or with other Conserve and Powders, may go to the making up of such Electuaries as these. Take of the Conserve of the yellow of Oranges, of Lemons, of flowers of Ash each 2 ounces, root of *Contrayerva* 1 drachm and an half, lesser Galangal half a drachm, root of Aron 2 drachms, *Species Aromat. Rosat.* 1 drachm, salt of Wormwood 2 drachms. With a sufficient quantity of Syrup of Nutmegs make an Electuary. The Dose of these Medicines is about the quantity of a Nutmeg, drinking some appropriate Liqueur upon it. For Country people and the poorer sort, who desire Medicines easie to be had and cheap, I prescribe in this manner: Take of leaves of Scurvy-grafs, Brooklime each 4 ounces, the whitest Sugar 8 ounces. Pound them together in a Mortar, adding of powder of Winter's bark half an ounce, Tartar calcined with Nitre three drachms. With a sufficient quantity of Canary make an Electuary. The Dose is, the quantity of a Walnut every day twice, drinking some appropriate Liqueur upon it. Take of Leaves of Scurvy-grafs 1 pound, stoned Raisins, the whitest Sugar each half a pound, *secula* of Horse-radish root 2 drachms. Pound them together in a Mortar, and reduce them into the form of an Electuary. The Dose is the quantity of a Walnut twice or thrice a day.

CONFECTIONS.

Take of *Pulvis Ari Compositus* 1 ounce, powder of Winter's bark half an ounce, *Species diatrium Santalon*, troches of Capers each 2 drachms, salt of Wormwood, Scurvy-grafs each 1 drachm and an half, candied Orange Peel 3 ounces. Pound them together in a Mortar. Then add of the whitest Sugar dissolved in a sufficient quantity of *agua umbri-corum* 3 ounces. Make a Confection according to Art. Take of candied Eringo and *Scorzonera* root each 2 drachms, preserved Walnuts, Myrobalans each N^o. 2. Electuary of Saffaphras 6 drachms, powder of Cubebs, Cardamum each 2 drachms, powder of root of Zedoary, *Angelica*, each 1 drachm and an half, Salt of Wormwood 2 drachms. With a sufficient quantity of Syrup of Walnuts make a Confection. Take of the powder of root of *China*, wood of *Sassaphras* each half an ounce, yellow and white Sanders each 2 drachms, seed of Rocket, Cubebs, Creffes, Granes of Paradise each 1 drachm and an half, *Species Dialacca*, powder of Cinnamon, Orrice, lesser Galangale each 1 drachm, salt of Wormwood 2 drachms, Conserve of the yellow of Orange, and *Saccharum anthosatum* dissolved in a sufficient quantity of Snail-water 3 drachms. Make a Confection according to Art. The Dose is the quantity of a Nutmeg twice a day, drinking some appropriate Liqueur upon it. In some cases of the Scurvy, where the use of steel is indicated, either 3 drachms of Steel prepared with Sulphur, or 2 drachms of Vitriol of Mars may be added to any of these prescriptions; either Confection or Electuary; and after taking the Medicine once or twice a day, the Body may be exercised according to its strength.

POWDERS.

Take of *Pulvis Ari Compositus* 1 ounce and an half, Winter's Bark half an ounce, Cubebs, Granes of Paradise, Cardamome each 2 drachms, Salt of Wormwood 3 drachms, Lozenges of Oranges 3 ounces. Make a powder according to Art. The Dose 1 drachm in an appropriate Liqueur. To the foresaid powder add of the Kernel of the Indian

B b b b

Nut

Nut *Cacao* half a pound. Reduce it into a Mass or Paste in a hot Mortar. The Dose is about two drachms, as you take Chocolate, that is boyled in Spring water wherein Rosemary leaves, or *Scorzonera* root, or shavings of Ivory or Hartshorn have been boyled.

PILLS.

They that like Medicines in a small Dose and in the form of a Pill. Take of root of Virginian Snakeweed, *Contrayerva* each 2 drachms, *Winter's Bark*, *Cubebbs*, *Rocket seed* each 3 drachms, salt of Wormwood, Scurvy-grass each 1 drachm and an half, extract or Rob of Juniper half an ounce. With as much Syrup of Nutmeg as is sufficient, make it into Pills. The Dose is 4 Pills twice a day with some appropriate Liquor.

LOZENGES.

For the more delicate, Lozenges or Sweet meats may be prescribed in this manner. Take of powder of *Winter's Bark*, Crabs Eyes each 1 drachm and an half, powder of Pearl half a drachm, whiteft Sugar dissolved in a sufficient quantity of *aqua lumbicorum*, and boyled up for Lozenges 6 ounces, Spirit of Scurvy-grass 2 drachms. Make Lozenges according to Art, each of which must weigh half a drachm. Let him take about 1 drachm drinking some appropriate Liquor upon it.

Ora ge Lozenges sold by the Apothecaries in OXFORD.

Take of Peel of Oranges, Lemons, Citrons candied, each 1 ounce, Eringo root candied half an ounce, Pine and Pistachio Nuts each N^o. 20. Sweet Almonds blanched N^o. 10. Powder of Anniseed half an ounce, candied Ginger 2 ounces, *Species Aromatici*, *Rosat*, Nutmeg each 1 drachm and an half. Root of Galangale 1 drachm, Cloves N^o. 10. Ambergrease 4 grains, Musk, Civet each 2 grains, the whiteft Sugar dissolved in Rose water, and boyled up for Lozenges 1 pound and an half. Make Lozenges according to Art. Thus much for Medicines that use to be given to Scorbutick Persons in a solid form, or a thick substance. And that they may do the more good, and be carried more easily into the Mass of Blood, liquid Medicines for the most part are prescribed to be drunk upon them; the most usual forms whereof follow.

1. Decoctions.

Although Decoctions be the most familiar sort of Medicine, yet they are rarely used in the Scurvy, because Simples, which are especially proper for this Disease, as Scurvy-grass, Brooklime, &c. lose their virtue, which they receive from their volatil Salt, by boyling. Nevertheless, because Medicines are easily and quickly prepared this way, they may sometime be admitted. And besides experience testifies, that some of them have been effectual. This easie Medicine is commended by several Authors for Country People and the poor; Take of leaves of Water Cresses 3 handfuls, the lesser Sorrel 2 handfuls. Let them be shred, and steeped in 6 pounds of Milk and boyled to the consumption of a third Part. Let 6 or 8 ounces be taken twice a day. The Decoction of Wormwood is commended by *Engalenus* and others. I have often tried the following Remedy with good success; Take of tops of Broom 3 handfuls, let them be cut small and boyled in three

pounds of strong Beer to half. Let 2 or 3 ounces be given twice a day.

2. Infusions.

An Infusion added to the Decoction makes a most excellent Medicine; Take of root of *Scorzonera*, Chervil each 1 ounce, leaves of Agrimony, Ground-pine each half an handful, burnt Hartshorn 2 drachms, Raisins half an handful, boyl them in 3 pounds of Spring-water to the consumption of a third part. Add of Rhenish Wine half a pound, and presently strain it into a Glass Vessel, to which put leaves of Scurvy-grass, Brooklime, bruised, each half a handful, Orange peel candied and cut small half an ounce: Make a close and warm Infusion for 6 hours. Let the Colature be kept in Bottles stoppt. The Dose is 6 ounces twice a day after a solid Medicine. Take of Whey made with white Wine or Sider 1 pound and an half, let there be boyled in it of Burdock root, Eringo root candied, each 6 drachms, preserved Juniper berries half an ounce. Let the Liquor be boyled to the consumption of a third part, and strained into a Flagon, in which put leaves of Scurvy-grass, Brooklime each 1 handful. Make a hot and close Infusion for 6 hours. The Dose is half a pound twice a day, after a solid Medicine. Also Infusions made by themselves are sometimes of excellent use. Take of Scurvy-grass 1 handful, shavings of Horserhadiish root half an handful, *Winter's bark* bruised 2 drachms. Let them be put in a Glass with white Wine or Syder and Scurvy-grass water each 1 pound. Make an Infusion in a Cellar for 2 or 3 dayes, The Dose is 6 or 8 ounces twice a day, as before.

3. Juices and Expressions.

The most commendable way of using Antiscorbutick Herbs or Fruits is, to take the Juices and Expressions of them by themselves, or with some other proper Liquors twice or thrice a day: for so it is presumed, the virtue of the Medicine is given intire and untainted. Take of Water-Cresses, Brooklime each 3 handfuls, when they are bruised, strain out the juice, keep it in a Glass stoppt. The Dose is from an ounce and an half to 3 ounces, twice a day in a draught of Beer, Wine, or distilled water. Take of leaves of Scurvy-grass 4 handfuls, Wood-forrel 2 handfuls. When they are bruised, and the juice strained out, it quickly grows clear, when it is stoppt up in a Glass: for the sowerness of the Wood-forrel precipitates the grosser parts of the Scurvy-grass. The same succeeds if the juice of Orange be mixt with the juice of Scurvy-grass. The Dose is 2 or 3 ounces twice a day. Take of Scurvy-grass 4 handfuls, Brooklime, water-Cresses each 2 handfuls, long Pepper 3 drachms, shavings of Horserhadiish 2 ounces. Put them all in a glazed pot, with 2 pounds of Rhenish wine, or, if you had rather, Spanish: stop the mouth of it well, and let them stand for 2 dayes in a cool Cellar. Then make a strong expression. The Dose is 3 ounces twice a day after a solid Medicine. Take of Scurvy-grass 3 handfuls, Brooklime, Water-Cresses, Wood-forrel each 1 handful. When they are bruised pour to them Snail and Worm water each 6 ounces. Make a strong Expression, which must be kept in a Glass stoppt. The Dose is 2 ounces twice a day.

4. Syrups.

4. Syrups.

Syrups are not so well approved on in the Scurvy for the same reason as Decoctions, for as much, to wit, as the virtue of the most efficacious simples evaporates in boiling: yet because some may have occasion for such a Medicine, to sweeten some appropriate Liquors, I will here propose our preparation, reserving as much as may be, the virtue of the Ingredients. Therefore take of the leaves of Garden Scurvy-grass 6 handfuls, the Peels of 4 Oranges and of two Lemons, shaven thin, shaving of Horse-radish half an handful, powder of long Pepper 3 drachms. When they are all bruised together, strain out the juice, which being put up in a Glass well stopp'd, let it be set in a cool Cellar, till it clarify by settling, then let the clear Liquor be poured off by inclination into another Glass, and being close stopp'd let it be kept in *Balneo Mariæ*, in the mean time for each ounce take an ounce and an half of Sugar; and let the whole quantity be dissolved in *aquæ lumbricorum* and boiled up fit for Lozenges; to which by and by let the foresaid Liquor be poured hot by degrees, and mixt with a *Spatula*. As soon as it is incorporated, let the composition be taken from the Fire, and when it is cold, let it be put in a Glass. Let this Bag be hung in the Glass; Take of Cinnamon bruised 1 drachm and an half, seed of Cresses, Rocket powdered each 1 drachm. Mix them.

5. Distilled Waters.

Distilled waters, because they are a neat and a pleasant Remedy, have the greatest share in making up Antiscorbutick prescriptions. There are some such very useful and curious Remedies in our Dispensatory, such as *Aquæ Rûphani composita lumbricorum*, and *limacum Magistralis*. Besides famous receipts of such waters given us by *Quercetan*, *Dornicellius*, *Sennertius*, *Doringius* and other Authors. Moreover it is very easie for any Physician to prescribe such Receipts, proper for every Patient's condition, according to the occasion: For there are in them Antiscorbutick Ingredients, and moreover such things as respect some particular accidents and Diseases, to which, when they are shred and bruised, some convenient Liquor, as white Wine, Syder or Whey made with either of them, is poured, then the whole mixture is distilled in such Organs as they distil Rose-water. I shall here subjoin a Receipt or two which I make use of. Take of the Leaves of both the Scurvy-grasses, Brooklime, Water-Cresses, Broom-tops, each 3 handfuls, Leaves of Germander, Ground pine each 2 handfuls, Horse-radish root half a pound, Root of Aron, Angelica, Masterwort each 4 ounces; *Calamus Aromaticus* 1 ounce, Cinnamon, Cloves each half an ounce. When they are bruised and shred, pour to them of the best Syder 8 pounds, let them be digested for 2 days in a glazed pot stopp'd: then let them be distilled in a common distillatory: and let the Waters first and last drawn be mixt. In Winter time, when green Herbs are scarce, you may prescribe in this manner; Take of Leaves of Scurvy-grass 4 handfuls, tops of Broom, Pine, Juniper each 3 handfuls, *Winter's bark* 4 ounces. When they are bruised pour 8 pounds of white Wine, or Syder, or Whey made with either of them, and let them be distilled. The Simple water distilled off Aron Leaves in Spring time, is an effectual Medicine against the Scurvy, if 3 or 4 ounces of it be given every day twice with some other Medicine. The Simple water of Scurvy-grass, poured again to the fresh Leaves bruised, and

distilled off again, and so repeated by frequent cohobations, becomes an effectual Remedy. Furthermore, a burning Spirit of Scurvy-grass is prepared in this manner; Take of Leaves of Scurvy-grass as much as you please, bruise it, and make it up into Balls, such as are made of Woad for the Dyers, then let these Balls be put in a glazed pot, and pour either Scurvy-grass water or Wine, till it stand 4 Inches above, and set it exactly stopp'd in a cool place 3 or 4 dayes: Then let the whole matter be distilled by Alembick: The distilled water may be rectified in a Body. The burning Spirit comes first, 15 or 20 drops whereof may be given in some convenient vehicle.

6. Antiscorbutick Wines and Beer.

I use to make a Simple Antiscorbutick Wine of excellent use in this manner, in the Spring or Summer time. Take of Leaves of Scurvy-grass gathered in a serene time, as much as you please: Juice it, and fill a Vessel of 3 or 4 Gallons. Put a spoonful or two of yeast, and let it work for 2 dayes: Then stop the Vessel, and let it stand in a Wine Cellar for 6 Months: Then let the clear Liquor, a little yellow like Spanish Wine, be drawn off into Bottles, and kept for use. It lasts uncorrupt for several years. The Dose is 3 or 4 ounces twice a day. Medicated Wines, a Glass or two of which may be taken at medical hours, or at Dinner every day may be made in this manner. Take of Scurvy-grass 4 handfuls, of shavings of Horse-radish 4 ounces, *Winter's bark* bruised half an ounce, the outer rinds of 4 Oranges and so many Lemons. Put them in a Glass with 12 pounds of White Wine, Rhenish, or small Canary. Let the Vessel be stopp'd and kept in a cool place. Pour off the Wine clear, when you have occasion to use it. It is more usual to prescribe Scorbutick Persons a medicated Ale or Beer for their ordinary drink. Get some Wort for a four Gallon Vessel, instead of Hops boyl 3 handfuls of Pine or Firr tops in it. After it has done working, put 3 handful of Scurvy-grass Leaves in it, of the root of sharp-pointed Dock prepared 4 ounces, Peels of 4 Oranges, when it has settled a Week and is clear, let it be drunk. Such Physick Drinks as these may be diversly prepared with other Ingredients, according to the temperament of the Patient, and the Disease, which sort of Remedy, because the Medicamentous particles, which alter the Dyscrasie of the Blood are continually carried into its Mass together with the Alimentous, often do a great deal of good. Willis, de Scorbutus.

XII. In some Scorbutick Persons the use of Scurvy grass, Horse-radish, *Winter's bark* and other sharp things, that have a volatil Salt in them, are found to do a great deal of harm: Wherefore in such cases, where the morbifick cause consists in a hot Dyscrasie of the Blood, like fretted Wines, temperate Medicines, and such as do not move the particles of the Humours, that are apt to ferment of themselves are good, wherefore I shall treat of Medicines for this parallel to the former, and begin with solid Medicines.

ELECTUARIES.

Take of Conserve of Brook-lime, Lady-smock made with an equal quantity of Sugar each 3 drachms, *Species diatriam Santalum*, *diarrhodon Abbatis* each 1 drachm and an half, powder of Ivory 1 drachm, Pearl half a drachm, Salt of Wormwood, Tamarisk each 1 drachm. With a sufficient quantity of Syrup of Corals make an Electuary. Take of Conserve of Wood-forrel, of Hips each 4 ounces (or Conserve of root of sharp-pointed Dock,

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root

root of Cichory each 3 ounces) Trochises of Rhubarb 2 drachms, *Spec. diamargarit. frigid.* 1 drachm and an half, bark of Tamarisk 1 drachm, *Sal prunellæ* 1 drachm and an half, preserved Myrobolans N^o. 2. With a sufficient quantity of Syrup of Myrobolans make an Eleſtuary. I use to prescribe this easie Medicine for the poorer sort; Take of Leaves of Brooklime 6 ounces, Wood-forrel 2 ounces, whitest Sugar 8 ounces, let them be pounded, adding of powder of sweet Fenil seeds half an ounce, powder of Ivory 2 drachms, *Sal prunellæ* 1 drachm. With a sufficient quantity of Syrup of juice of Brooklime make an Eleſtuary.

CONFECTIONS.

Take of the powder of the root of *China*, male Peony each 1 ounce, white and yellow Sanders each 3 drachms, Ivory 1 drachm and an half, Coral sprinkled with the juice of Oranges, and ground on a Marble 2 drachms, whitest Tartar 1 drachm, whitest Sugar dissolved in a sufficient quantity of compound *Scordium* water 6 ounces. Make a Confection. Take of the root of candied Eriugo, candied *Scorzonera* each 3 ounces, *pulvis Ari compos.* half an ounce, *Species diatrion Santalon* 2 drachms, *Sal prunellæ* 1 drachm and an half. With a sufficient quantity of Syrup of Clove gilliflowers make a Confection.

POWDERS.

Take of powder of the leaves of Ground-pine, *Ari compos.* each 1 ounce and an half, powder of Ivory, red Coral prepared with juice of Oranges each 2 ounces, lozenges of Oranges 2 ounces. Mix them. Make a powder. The Dose 1 spoonful twice a day.

PILLS.

Take of *Spec. diatrion Santalon*, *diamargarit. frigid.* each 2 drachms, seeds of Citron, *Carduus* bruised each 1 ounce, root of Dittany of Crete, male Peony each 1 drachm and an half, Salt of Tamarisk 2 drachms, with a sufficient quantity of Gelly of Harts horn or of Snakes skins make a mass.

LOZENGES.

Take of *Spec. diatrion Santalon*, *diamargarit. frigid.* each 1 drachm and an half, powder of Pearl, of red Coral prepared, powder of Ivory each 1 drachm, Sugar dissolved in *Scordium* water, and boyled up for Lozenges 6 ounces. Make Lozenges according to Art. But if the use of Steel be indicated with such temperate Antiscorbuticks, 2 drachms of *Magisterium Martis Mynsichti* or of Extract of Steel of our preparation may be added to the Eleſtuary, or Confection, or Mass of Pills. In some cases about 2 drachms and an half or 3 drachms of *crocus Martis* may be added to such a Composition; yet it is better to make the Liquors, that are to be drunk on the solid Medicines, chalybeate then the foresaid compositions. Now it remains to give some receipts of the Liquors.

Decoctions.

In a Scurvy, that comes after a long Fever, such Decoctions as purifie the Blood and plentifully provoke Urine, are given with success. Take of root of Chervil, *Scorzonera*, Sorrel, Parsly, each 1 ounce, Leaves of Liverwort, Harts-tongue, each 1 hand-

ful, burnt Harts-horn 2 drachms, parings of 3 Apples, Corinths 2 ounces, Liquorish 3 drachms. Boyl them in 4 pounds of Spring water to a Consumption of a third part. The Dose is 6 ounces after a solid Medicine. To Country People and the poorer sort, that after a Fever they may not fall into the Scurvy, I use to prescribe the following draught twice a day, namely, to take of root and leaves of Dandelion 1 handful and an half, of Posset drink 1 pound and an half. Boyl them to the consumption of a third part, strain it for 2 Doses. Or, Take of root of Dandelion half an handful, seeds of Citron, *Carduus* each 1 drachm. Boyl them in a pound and an half of Pippin, or Syder posset Drink, to the consumption of a third part.

Infusions.

The Apozems but now prescribed, will become much better against the Scurvy, if they be made without Liquorish, and strained into a Flagon, in which a handful of Brooklime and Scurvy-grass Leaves, or Lady smock may be put, and then a hot and close Infusion made for 6 hours. When the liquor is strained, keep it in Vessels close stoppt. The Dose is 6 ounces twice or thrice a day. And Chalybeate Infusions are often used, namely Salt, magistery or extract of Steel may be infused in some decoction or distilled water; moreover, as natural Spaws, so also artificial ones of our preparation of Steel dissolved in Spring-water, and impregnated with infusion of Antiscorbuticks, are drunk with great benefit.

Juices and Expressions.

Take of Leaves of Brooklime, Water Cresses each 4 handfuls, Wood-forrel 2 handfuls. When they are bruised, strain out the juice, if it be stoppt close in a Glas, it will quickly clarify and settle. The Dose is an ounce and an half to 2 ounces, with some convenient vehicle. Take of Brooklime 4 handfuls, Leaves of *Engliſh* Rhubarb 2 handfuls, bruise them, and strain out the juice. Take of Leaves of Brooklime, Water Cresses, Lady-smock, lesser Celandine, Sorrel each 2 handfuls. When they are bruised, strain out the juice, add a 4th part of juice of Oranges. Keep it in a Glas.

Syrups.

As often as a Syrup is required to be added to any other Composition, we use Syrup of juice of Wood-forrel, or Fumitory, or Coral, or a magistery Syrup of juice of Brooklime may be made the same way, as is prescribed above for juice of Scurvy-grass.

Distilled Waters.

More temperate distilled waters are made by changing either the ingredients, or the *Menstruum*, or both. As to the former, we may proceed in this manner. Take of Leaves of Brooklime, Water Cresses, Fumitory, Harts-tongue, Liver-wort, Balm, tops of Tamarisk, Cypress each 3 handfuls, of all the Sanders bruised each half an ounce, root of sharp-pointed Dock, Polypody of the Oak each 2 ounces, the outer rind of 4 Oranges, of cleansed Snails 2 pounds. When they are cut and bruised, pour to them 6 pounds of Whey made with Syder. Distil them in a common Distillatory. 2. Let the *Menstruum* be weaker and the ingredients moderately hot; Take of Leaves of Scurvy-grass,

Scurvy-grass, Lady-smock, Water Cresses each 3 handfuls, Peels of 4 Oranges, Snails 1 pound, when they are chopt very small, pour to them of Whey or new Milk, 6 pounds, distill them the common way. 3. In a Scorbutick Atrophy and Consumptive disposition, where nothing hot ought to be admitted, which may exagitate the Blood, humors and spirits, both the Ingredients and the *Menstruum* must be temperate and sweetners of the Blood; Take of Leaves of Brooklime, Lady-smock, Harts-tongue, Maiden hair, Liverwort, Speedwell, Agrimony each 2 handfuls, cleansed Snails 1 pound and an half (or the pulp of a Capon or a Sheeps Heart shred) parboyled and shred. When they are all bruised together, pour to them of new Milk or Fumitory water 6 pounds, and distill them the common way.

Physick Wines and Beer.

Although the use of Wine in a Scurvy, caused by a hot or Sulphureo-Saline Dyscrasie of the Blood, may not seem so convenient, yet if at any time either a weak Stomach, or long custome require the drinking of small Wine at least, such a Liquor may be made more temperate and in some measure medicated. For first of all small Wines may be given, diluted with water, impregnated with an Infusion of Balm, Borage, Burnet or other such things. Moreover Wines may be made of juice of Currans, Cherries, or other horary Fruits, which when they are ripened by fermentation, are very grateful to the Stomach and cleanse the Blood; then Syder, the familiar, and almost natural Wine of our Country, defecated this way, when it is mild and sweet without any acidity, does much good in the Scurvy. Furthermore, when the Lees are taken from this Liquor and it is put up in small Vessels, several sorts of Ingredients may be infused in it, such as tops of Pine or Firr, flowers of Tamarisk, also shavings of Harts-horn or Ivory, which sweeten the Liquor and keep it from fowring; in as much, to wit, as the particles of the fluid Salt up and down the Syder, which are apt to cause sowerness, are by infusing the said Ingredients, suspended. More temperate Physick Ales may be prescribed in this manner; Let a 5 or 6 gallon Vessel be got ready for small Ale, in which instead of Hops, let tops of Pine, Firr, Tamarisk, or shavings of any of the Woods be boyled; then after working let some roots of sharp-pointed Dock, (than which certainly there is no better Remedy for the Scurvy) be put in the Vessel. To these sometimes there may be added Leaves of Brooklime, Water-Cresses, Winter Cresses, &c. also pome-Citrons or Oranges cut into slices. Leaves of Harts-tongue put into a Barrel of middling Beer, after it has done working, give it both a grateful tast and smell.

XIII. The method already laid down timely begun, and rightly insisted on, often does the business, in as much as the cause or root of the Disease being taken away, the Ails depending thereon vanish of themselves. Yet we cannot always hold a direct course, but must sometimes turn aside to accidents and symptoms, to the most urgent whereof we shall have respect.

Of the Cure of difficulty of breathing, and Asthmatick Paroxysms.

Difficulty of breathing with straitness of Breast and Asthmatick Paroxysms, must be immediately removed with proper Remedies, prescribed out of the general method, for otherwise the Patient's life would quickly be endangered. And since such

evils usually arise either from the Bloods stagnating in the Heart, or from the pneumonick Nerves being hindered in their function, therefore they are cured either by Cordial, or Antispasmodick Medicines. Spirit of Harts-horn, Soot, Blood, Mans Skull; also tinctures of Castor, Antimony, or Sulphur, flowers of Sal Ammoniack, of Benzoin, and *Elixir proprietatis* are of excellent use in these cases, which Medicines may be given frequently in a Dose of some Antiscorbutick Liquor good against such Diseases. For the quieting a mere spasmodick difficulty, if at any time it come suddenly, I have not experienced a more present Remedy than 10 or 12 drops of our tincture of *Laudanum opiatum* given in some convenient Liquor, for when sleep comes on, the Spirits abate their disorders, and in the mean time being refreshed, they afterward resume their pristine tasks in due order. Sharp Clysters, which give many stools, as also Sudorifick Decoctions, and Diureticks do often give relief; Take of root of Burdock, Butter-bur, Chervil, each 1 ounce, Leaves of Maiden-hair, Germander each 1 handful, Seeds of Burdock, *Carthamus* each 3 ounces, Raisins 2 ounces. When they are stoned and bruised, boyl them in Spring water to the consumption of a third part. Add of White Wine 4 ounces, strain them into a Flagon, to which put of Leaves of Scurvy-grass shred 1 handful, Elecampane root Candied and cut very small half a drachm. Make a close and hot Infusion for 3 hours. The Dose is 6 ounces twice or thrice a day.

Of ails of the Stomach, that usually come upon the Scurvy.

Scorbutick Persons are sometimes troubled with a great fulness and pain of the Stomach, and loathing and belching, and sometimes frequent vomiting. Which Diseases arise sometimes from chyle degenerating there into putrefaction, oftentimes from Morbifick matter, either carried from the Blood or Nervous juice, and left within the cavity of the Stomach, or fixt in its Nervous folds and Membranes: In such cases if a viscid nidorous matter, or any other way troublesome be cast up by vomiting, and there be suspicion, that the cause is within the Cavity of the Stomach, it will be convenient to give a gentle vomit of Wine of Squills, or Salt of Vitriol, or to purge off the peccant Humour, with extract or infusion of Rhubarb, adding a little Salt or Cream of Tartar; but if the matter stick close among the Membranes or Nervous folds, Diaphoreticks, or things that stop the effervescency of the Salts are rather convenient. *Elixir proprietatis* or flowers of Sal Ammoniac, or Spirit of Soot may be often taken with *agua raphani composita*, *lunbricorum*, or any other Antiscorbutick Liquor. In the mean time once or twice a day a fomentation of Wormwood, Centaury, Chamomil flowers, Gentian root, and other things boyled in White Wine may be applied to the region of the Stomach with woollen Clothes dipt therein hot and a little wrung out. The use of Clysters is convenient. Opiates also often do a great deal of good.

Of the Belly-ache and Scorbutick Colick.

No Disease almost requires more speedily help from Medicine, then the Colick and Gripes which often happen in the Scurvy. Against these evils Clysters of divers sorts, Fomentations, liniments and Cataplasms are used. The use of Opiates is found very necessary here. Certainly in this case that rule of *Riverius*, to give purging Pills mixt with *Laudanum* has place especially, for after sleep

is caused, and plentiful purging, the Flt is often at an end. But testaceous powders, by which acid Salts are imbibed or fixt, do very much conduce to drive away the Morbifick cause, for example; Take of powder of Crabs eyes, Egg-shells each 1 drachm and an half, Pearl 1 ounce. Make a powder, divide it into 12 Doses, of which one sixth part may be taken once an hour, with some Scorbütick water, or with a Decoction of Root and Seeds of Burdock, as is described before, or with posset drink, wherein Roots and Seeds of Burdock, Leaves of sweet Marjoram and Saxifrage have been boyled, and Leaves of Scurvy-grass infused. In a Scorbütick Colick, and in the Diseases of the Stomach but now mentioned, the use of purging Spaw-waters, such as ours of *Epsom* and *Barnet*, are excellent good.

Of a Loosness and Bloody Flux.

An inveterate Loosness, such as frequently happens to Scorbütick Persons, must by no means be stoppt with astringent Medicines, nor is easily cured with Alteratives or any Antiscorbüticks. Spaw waters impregnated with Iron or Vitriol are the best Remedy for this Disease, next to these are artificial Spaws or Chalybeate Medicines, which use to give great relief. *Crocus Martis* rightly prepared may well be preferred before all the rest. I have often used the following method with good success. First of all give a purge of the powder or infusion of Rhubarb adding astringent Aromatics, and let it be repeated sometimes at the interval of 3 or 4 dayes, the other dayes let the quantity of a Nutmeg of the following Eleatuary be taken in the morning and at 4 of the Clock; Take of Conserve of common Wormwood made with an equal quantity of Sugar 6 ounces (in a hot Constitution, instead hereof, Conserve of red Roses may be taken) *Species diarrhodon Abbatis* two drachms, Sanders white and red powdered each 1 drachm, the best *Crocus Martis* half an ounce. With a sufficient quantity of Syrup of Steel make an Eleatuary. In Dysenteries and a *Tenesmus* we may proceed in the like method: Spaw waters, if they may be had, must especially be used. Moreover Clysters of vulnerary Decoctions may be often used. I lately cured one of a long and grievous Dysentery, who had for a long time voided every day an ounce of Blood by Stool, with this Remedy; Take of the best Rhubarb in powder 1 ounce, red Sanders powdered 2 drachms, Cinnamon 1 drachm, *Crocus Martis* 3 drachms, *Lucatella's* Balsome what is sufficient. Make a mass for Pills; he took 4 Pills, sometimes every day, sometimes every other day for a fortnight and he was perfectly cured. I also prescribed him a Physick Beer of an Infusion of roots of sharp pointed Dock, and Leaves of Brooklime to drink constantly.

Of the Vertigo, Swooning and other Ails usually attending the same in the Scurvy.

A *Vertigo* frequently comes upon an inveterate Scurvy, which is usually accompanied with frequent Swooning; and almost a constant dread of it, and moreover with a numbness in the Limbs, and a pricking running hither and thither. Which sort of Ails proceed from the failure of the Animal Spirits sometimes in the very fountain, sometimes among the Nerves, both Cardiack, and which serve other parts, and seeing they depend upon the Brain and Nervous kind, being much pestered with a Scorbütick Salt, they are not easily cured. Cephalick Remedies, such as are proper in the *Vertigo* and Paralytick Diseases cau-

fed by themselves, must be used mixt with Antiscorbüticks. Having therefore first of all made provision for the whole by fitting Catharticks, and such as are proper in the Scurvy, you may proceed in this manner with appropriate Medicines against the said Ails. At the beginning of the Cure apply Leeches to the Hamorrhoid Veins, and, unless something contra-indicate, let the same be often afterwards repeated. Take of the powder of the Root of male peony half an ounce, red Coral prepared 2 ounces, Man's Skull, Elk's hoof each 1 drachm. Mix them. Take of the best Sugar dissolved in compound Peony water or in Horse-radish water, boyled up fit for Lozenges 8 ounces, oyl of Amber well rectified half a drachm. Make Lozenges according to Art. Take a drachm and an half or two drachms morning and evening, drinking thereupon a draught of the distilled water following; Take of Leaves of Scurvy-grass, Brooklime, Cresses, Lilly conval, Sage, Rosemary, Betony each 3 handfuls, green Walnuts 1 pound, Peels of 6 Oranges and of 4 Lemons, fresh Roots of male Peony 1 pound and an half. When they are bruised and shred, pour to them of Phlegm of Vitriol 1 pound, Whey made with Cider 5 pounds. Distil them after the common way, let all the water be mixt together. The Dose is from 3 to 4 ounces.

Of Hamorrhagies.

Hamorrhagies in the Scurvy often threaten great danger of the Patients being hastened to his end thereby; while Blood bursts out sometimes at the Nose, sometimes by the *Menses* or Hamorrhoids, almost to Swooning; Besides, sometimes it being cast out of the Lungs or Stomach, gives suspicion either of an Ulcer, or at least of a great debility in the part affected. Wherefore Bloody excretions, if they either be immoderate or come in an inconvenient place, must for the present be stoppt, and for the future prevented. For stopping of Blood, when it bursts out immoderately, the method is well enough known, and there is nothing to be done in this Case more peculiar because of the Scurvy, than when it comes upon other occasions. Yet, to prevent Hamorrhagies, Remedies may be used, which take off the Acrimony of the Blood, and straiten the Mouths of the Vessels, which are too lax and gaping. Each intention may be well performed by Chalybeate Medicines. The use of Vitriolick Spaws is most proper for this business: Moreover Infusions, Extracts, Salts, and such preparations of Steel, which especially contain the Saline or Vitriolick nature of Iron are ever good against Hamorrhagies. Take of Conserve of red Roses, of Hips each 3 ounces, *Species diarrhodon Abbatis*, *Diatrion* each 1 drachm and an half, Salt of Steel 1 drachm, *Crocus Martis* well prepared 2 drachms, red Coral prepared 1 drachm and an half. With a sufficient quantity of Syrup of Steel make an Eleatuary. Thrice a day take the quantity of a Nutmeg, drinking thereupon a draught of some appropriate Liquor. I use to prescribe for the Poor in this manner; Take of the tops of Cypress, Nettle each 2 ounces, Brooklime 2 ounces, bruise them in a Mortar with 10 ounces of the whitest Sugar, then add of Scales of Iron very finely powdered 1 ounce, powder of white and red Sanders each 2 drachms. With a sufficient quantity of juice of Nettle make an Eleatuary. The Dose is the quantity of a Nutmeg twice a day. Take of the defilled water, or Decoction of some temperate Anti-scorbutick two pounds, of our preparation of Steel 2 drachms. Mix them in a glass. The Dose is 3 or 4 ounces. Take of Nettle tops, Leaves of Brooklime each 4 handfuls. When they are bruised, strain out the juice,

juice, keep it in a Glass. The Dose is 2 or 3 ounces twice a day, with some distilled Antiscorbutick water.

Of faults in the Mouth arising from the Scurvy.

Whenever the Scorbutick Infection has seized the Mouth, so as the Gums swell, and the flesh of them become fungous, immediately Remedies, which drive away putrefaction from them, must be diligently used: Among these, Washes for the Mouth, and Liniments are of especial use, both when the Disease begins about these Parts, and when it grows worse; which nevertheless, as they respect divers intentions, so they use to be diversly prepared, to wit, the flesh of the Gums, when it first swells, must be freed from the Incurfions of a Salt and corrupt Blood and Serum: afterwards the Flesh grown flaccid and shrunk from the Teeth must be defended from putrefaction, and that it may stick closer to the Teeth, there must be astringent; for these and other intentions Gargarisms or Mouth-washes of divers sorts may be used: Of all which the chief ingredients are Vegetables boyled, and Minerals infused: The Herbs and Roots that are boyled in some proper Liquor, either Water or Wine, are for the most part either sharp, or bitter, or styptick: and then such Decoctions are impregnated, either with a Volatil, Lixivial, Vitriolate, Chalybeate or Aluminous Salt. 1. When therefore the Flesh of the Gums, by reason of a defluxion of Salt and corrupt Blood and Serum, first begins to swell and grow fungous; Take of the middle rind of Elder, Elm, each half an handful, Leaves of Savory, Sage, Rocket, Cresses each 1 handful, Roots of Pellitory of Spain 2 drachms, being shred and bruised, boyl them in 3 pounds of Lime-water to the consumption of a third part: If edulcoration be required, add of Honey of Roses 2 ounces. Make a Gargarism. Or, take of tried Vitriol 1 ounce (our Country People call it Captain Green's powder) Spring-water 2 pounds, mix them in a Glass, shake it, and when the Liquor is settled and clear use it. Or, Make a Lix. of ashes of Broom or Rosemary, or of calcined Tartar or Nitre; in 3 pounds of this boyl of the Leaves of Savory, Time, Rosemary, Sage each 1 handful. Let the colature be poured upon 2 handfuls of Scurvy-grass Leaves. Make a hot and close Infusion for 3 hours, strain it again and keep it to wash the Mouth often in a day. For the same intention also Liniments at times, and especially at Night may be applied, that their virtue may be communicated to the Patients even while they sleep. There is extant a Famous prescription frequent among Authors, and approved by long experience. Take of Leaves of Columbine, crisp Mint, Sage, Nutmeg, Myrrh (which yet sometimes is omitted) each 2 drachms, burnt Allum half an ounce, Virgin Honey 4 ounces or what is sufficient, make a Liniment according to Art. 2. If at any time the flaccid Flesh of the Gums part from the roots of the Teeth, a gentle scarification is often used; moreover let the Mouth be washed with this Decoction; Take of tops of Bramble Cypress, Leaves of Sanicle, Ladies smock each 1 handful, boyl them in water, wherein Iron has been quenched, 3 pounds, to the consumption of a third, add to the colature of Honey of Roses 2 ounces. Mix them. Such a Liniment as this may be applied; Take of the powder of Florentine Orrice, Leaves of Sage, St. John's-wort each 2 drachms, bole Armonick, *Sal prunellæ* each 1 drachms, Virgin Honey hot what is sufficient, incorporate them well by stirring. 3. When the Gums are putrid and corrupt, and the Teeth are rotten and loose, and send out a nasty stink, stronger Medicines, and such as exceedingly resist putre-

faction, may be used; an Infusion of Camphorate vitriol, or *Lapis Medicamentosus* are especially proper in this Case. Or, Take of root of Gentian, round Birthwort cut each half an ounce, Leaves of lesser Centaury, Sea Wormwood, Savory; Columbine each 1 handful, boyl them in some lime or lixivial water, and sometimes wherein Iron has been quenched or Allum dissolved 3 pounds, to the consumption of a third part. To the Colature add 2 or 3 ounces of crude Honey. Mix them. 4. If the falling of the Teeth be chiefly feared; Take of the bark of the root of the wild Sloe-Tree 1 ounce, Tormentil, and of Bistort whole each an handful, Pomegranate rind and flowers each half an ounce, boyl them in 3 pounds of Spring water, the best Honey 2 ounces. Mix them. Take of Camphorate Vitriol, burnt Harts-horn each 1 drachm, Nutmeg half a drachm, the best Honey what is sufficient. Make a Liniment. Or, Take of the Powder of root of Bistort, Pomegranate rind, Bole-Armonick, burnt Allum each 1 drachm, Honey of Roses what is sufficient, add of Spirit of Vitriol 1 scruple. Make an ointment. 5. If at any time (as is sometimes usual) putrid and deep Ulcers seize the Gums or other Parts of the Mouth, the foresaid stronger Medicines must be often used: Moreover a rag dipt in *Unguentum Egyptiacum* dissolved in Spirit of Wine, or in an Infusion of *Lapis medicamentosus* or Sublimate, may sometimes be applied. In these cases the Cure must be left to a skilful Surgeon.

Of Pains that usually infest the Legs, and other Limbs sometimes, at Night especially.

Against these Pains, because sometimes they are very bitter, beside the general method of curing the Scurvy, specifick Remedies, and such as oppose this Symptom, are indicated, therefore in such a case, when a man has been well purged, and bled (if need be) it is convenient to set upon the Disease both by Medicines inwardly and applications outwardly. As to the former, things that move Sweat and Urine, often give relief, inasmuch as they carry another way the lixivial and acid recrement of the Blood and Nervous juice, which used to meet in the part affected: especially if such things be used as vindicate both these Humors from that bad disposition, as well saline as acid: Testaceous powders of Crabs Eyes, mandible of a Pike, also Spirit and Flowers of Sal Ammoniack, Spirit of Blood, Tincture of Antimony, Coral, Decoctions of root and seed of Burdock, Groundpine, Germander, are very good. Which sort of Remedies may be taken with distilled Antiscorbutick waters twice or thrice a day. Distilled water of Horse-dung, adding Scurvy-grass, Brooklime, *Iva arthritica* and the like, does sometimes a great deal of good. In the mean time Fomentations, Liniments, Cataplasms or Applications of other kind, which ease pain, may be outwardly applied.

Of the wandring Scorbutick Gout.

Concerning this affection *Eugalenus*, *Wierus*, *Medicus Camperis* and *Gregorius Horstius* have writ on purpose. It is said to be very frequent in the North-parts of Holland, of which they take a certain sign by applying a live Worm to the place pained, for it begins immediately to leap, wriggle and slide off, and usually dies, which indeed I have often by experience observed in this Disease among our own Country-men. The reason of which experiment (as I think) is this, we make the cause of the Pain and Swelling in the part affected to be, because Saline or lixivial Feculencies that are left by the Blood, and also by the Nervous Liquor, in the same

same place, do mutually ferment, just as Spirit of Vitriol, mixt with deliquated Salt of Tartar, more-over as from such struggling and agitation of dissimilar particles Pain and Swelling are caused, so indeed very sharp, and as it were corrosive *effluvia* do plentifully fly out, which kill the Worm, when it is applied to the pained place, just as if it were hung over these ebullient Liquors. Because of the effect of this experiment, the Cure of the Disease is managed by Worms, that is, by Medicines made of them; which yet I know not, whether taken inwardly they will as certainly cure the Disease, as they applied outwardly are killed by the Disease. However Worms, as also Snails, Sows, and other exanguous Animals inasmuch as they abound with a volatil Salt, so they often yield a Medicine effectual enough. *Henricus Petrus* tells of two Remedies for this Disease much used in *Westphalia*. 1. Take 9 Worms, bruised with 2 spoonfuls of Wine in a Mortar, and strained through a Cloth, to these add half a pint of Wine, Take 3 spoonfuls. Morning, Noon and Night for several dayes. 2. Take 2 or 3 sprigs of Savine, Virgin Honey 2 spoonfuls, Boyl them in a pint of Wine, till it sink 2 Inches. Let 4 or 5 spoonfuls of the colature be taken thrice a day. A certain vulgar potion, cited by *Horsius*, is near of kin to the first Medicine, it is called *Potio Monasteriensis*; Take of Sage, Betony, Rue each 5 Leaves, a little Savine and two roots of Devils bit. Bruise them with water of Elder flowers, and let the juice strained out be given to cause a Sweat. The like prescription also is propounded by *Medicus Campensis* in *Forestus*. Certainly in this Disease *Aqua Iunbricorum magistralis* set down in the London Dispensatory is excellent good. I have often used Spirit and Salt of Harts-horn, Spirit of Blood, and flowers of Sal Ammoniac with good success. Moreover Testaceous powders, to wit, of Crabs Eyes, Corals, Pearl, and Vegetables, which are reckoned Antidotes for the Gout, as Root of Birthwort, Leaves of Ground pine, Germander, and the like joyned with Antiscorbuticks, are good for the cure of this Disease. Beside outward Anodynes to assuage the pain, which are used in form of Liniment, Fomentation or Cataplasin, oyl of Worms, Frogs and Toads, are often very beneficial. I had it from an excellent Person, who was very subject to this Disease, that a water distilled off the Contents in the Stomach of an Ox newly killed, and taken out, and applied warm with Clothes in manner of a Fomentation, does give most certain relief.

*Of Convulsive and Paralytick Affections,
that usually come upon the Scurvy.*

If at any time the Scorbutick Infection break into the Brain and Nervous kind, and very much infect the irragious Liquor of either Province, for this reason indeed divers affections, and especially Paralytick and Spasmodick ones usually arise: namely, according as the Morbifick matter, brought by the regiment, is either narcotick or explosive. Which sort of affections, although in this case they be Symptomack, yet when they grow worse, they challenge to themselves both the name and better part of the Cure; so that the Patient may be rather said to be sick of the Palsie or Convulsion than of the Scurvy; Medicines also proper for these Diseases should be preferred before all other at that time, however requisite for other intentions. To cure such Diseases brought upon the Scurvy, we should make it our business, that Remedies appropriate to them, may be rightly complicated with Antiscorbuticks.

Of an Atrophy, and also the Scorbutick Fever, which is either the cause or effect of it.

There are 3 kinds of causing, depending in a certain order, of one or more of which a Scorbutick Atrophy, without a Consumption of the Lungs, is usually produced, to wit, either the Chyle is perverted through the fault of the first wayes, so that either not enough, or not good, is carried to the Blood. Or secondly, when it is brought thither, yet by the fault of the Blood it is not rightly changed into Blood and nutritious juice. Or thirdly, the nutritious juice being rightly prepared in the mass of Blood, through the fault of the Nervous Liquor, is not rightly assimilated to the solid parts. Remedies proper for this Symptome, either respect the emendation of the first wayes, or of the fore-said Humours. As to the former, it sometimes happens that through the broken tone or vitiated ferment of the Stomach, what food is taken, is not rightly concocted, but turns into an useless putrilage. For such ails, gentle Catharticks, Digestives, and Strengtheners may be used. Yet the work of Chylification is oftner hindered by a Scirrhus Tumor, rising sometimes in the Stomach, sometimes in the Mesentery, and other Parts thereabout: In this case opening and dissolving things are proper, the use of Spaws is before any other Remedy. Moreover Fomentations, Liniments, or Plaisters must be outwardly applied. Furthermore sometimes it happens, that without any Tumor arising in the Bowels, the lacteal Vessels are so much obstructed with a thick & viscid matter settled in them, that a sufficient store of Chyle, though made laudable and with plenty sufficient, cannot be carried to the Blood: In this case the Belly is for the most part very loose, the stools are white and like curdled Milk, and not tinged with bile or stinking like other Peoples Excrements. The reason whereof is, because the depauperated Blood breeds but little yellow bile, from the pouring out of which in the Guts, the colour and stink of the Excrements proceed. In this case Spaws are chiefly proper, and when openers are given inwardly, Liniments, Fomentations, and Bathings may be used outwardly. For a *Marasmus* arising from the Blood's degenerating from its frame, these things are good, Ases or Cows Milk diluted with Barley water or some proper distilled water, often do good, Broth or Milk with Snails boyled in them: Moreover Waters distilled off Milk or Whey with Snails and temperate Antiscorbutick Herbs, are very good in this case; for this purpose also Decoctions of vulnerary and Antiscorbutick Herbs are taken with good success. In the mean time frictions to the out parts may be used every day with Clothes bedewed with *unguentum resumptivum*, or fresh Oyl of sweet Almonds and warmed. When the Atrophy arises from the fault of the affected Blood, and therefore perverting the nutritious juice, for the most part it has an erratick Fever joyned with Night Sweats, inasmuch namely as the Mass of Blood is forced by that degenerate juice into unequal and uncertain Effervescencies, and so the troublesome matter is cast off by Night sweat. In this case, when a spare diet is ordered, Decoctions and distilled waters, which melt and purifie the Blood, may be often taken mixt with Antiscorbuticks; Take of the shavings of Ivory, of Harts-horn each 2 drachms and an half, candied Eringo roots 6 drachms, root of Chervil, Dandelion, each half an ounce, Leaves of Harts-tongue, Liverwort each 1 handful, 1 Apple sliced, Raisins 1 handful, boyl them in 3 pounds of Spring water to the consumption of a third part. Let the colature be poured

to 2 handfuls of Leaves of Brooklime bruised, *Sal prunelle* 1 drachm, and an half or fixt Nitre 1 drachm. Make a hot and close Infusion for 3 hours. Take 4 or 6 ounces thrice a day. Take of Leaves of Brooklime 4 pounds, Sorrel, Dandelion the whole each 2 handfuls, Snails cleansed 1 pound, two Orange Peels. When they are shred and bruised, pour to them of new Milk or Whey made with Syder or fresh juice of Apples 6 pounds. Destil them the common way. Take 3 ounces twice or thrice a day.

Of the Rheumatism.

We conclude that this Disease comes from the congress and mutual effervescency of Salts that are of a divers original and nature, namely of a fixt one coming from the Blood, and an acid from the Nervous Liquor. The subjects of both these Salts are superfluous fæculencies, left by the foresaid Humours, when they are forced into a turgescency, and poured sometimes into this, sometimes into the other part. Wherefore that the Disease may be cured, both the turgescency of the Humours must be stopt, and their superfluous fæculencies purged out, also the Salts either way degenerate must be reduced to a state of volatility. For the two first intentions a gentle purge, and Blood-letting is required in the first place, and accordingly as they can bear it, must sometime be repeated, and also Diureticks and Diaphoreticks, which may in some measure convey away the Saline serosities, must now and then be given, which evacuations that they may be made more sedately, and be the better bore by the assistance of nature, Opiates must be frequently made use of. For the other Scope, upon which the chief hinge of the Cure does hang, alteratives, and especially such as are endued with a Volatil Salt, are very good: Wherefore in this Case there is a vulgar but no contemptible Medicine, to give an Infusion of a Stone Horse dung in white Wine or some distilled water to 3 or 4 ounces twice a day. I have given Spirit of Harts horn and of Blood often in these Cases, to the Patient's great advantage.

Of the Dropsie.

Whereas we judge there is a twofold Dropsie comes upon the Scurvy, that is an habitual and an occasional one; about the Cure of the former we commonly lose our Labour: for no Remedies are able to restore the Liver and Lungs, and other Parts sometimes wholly vitiated, and the frame of the Blood when it is utterly subverted. In such a Case, if any thing can be found to be done, the bounds of Medicine are very narrow: for there is no place left for Catharticks, nor Diaphoreticks, nor for strong evacuation of any sort: We must insist especially, and almost only on Cordials and Diureticks. To these ends Elixirs, Tinctures, Elestaries, Powders, Infusions, Decoctions, distilled Waters, &c. which consist partly of Antihydropsicks, partly of Antiscorbuticks. A Scorbutick Dropsie, from an evident cause, or raised on a sudden from some occasion, does often admit of Cure, which indeed that it may succeed the more easily, the Tumults of nature ought first to be quieted, and its disorders restrained: wherefore if watchings do still annoy them, Sleep must be procured by use of Opiates, and now and then as often as there shall be occasion, forced. As soon as they are able to be purged, the following powder may be taken, and at due intervals may sometimes be repeated; in the mean time let the Body be kept Solutive by the frequent use of Clysters; Take of *Mercurius dulcis* 1 scruple, resin of Jalap from 5 grains to 10,

Cloves half a scruple; let it be given in a spoonful of Panada. At other times Diureticks, and sometimes Diaphoreticks may be carefully given; Take of the Tincture of Salt of Tartar impregnated with an Infusion of *millepedes* as much as you please, give a scruple or two twice a day with some appropriate Liquor. Take of the Spirit of *Sal Ammoniac* what you please. The Dose is from half a scruple to 15 drops, in the same manner. Take of *millepedes* prepared 3 drachms, Salt of Tartar 2 drachms, Nutmeg 1 drachm, mix them, make a powder. The Dose is half a scruple twice a day in some proper Liquor. Or, Take of Bees dried and powdered 2 drachms, seed of *Ammi* powdered 1 drachm, oyl of Juniper 1 scruple, Turpentine what is sufficient. Make a mass of Pills. The Dose is from 1 scruple to half a drachm, twice a day drinking thereupon some Specifick Liquor. Take of Leaves of both Scurvy grasses, Water Cresses, Pepperwort, Arsmart, each 3 handfuls, Root of Aron, Bryony, Florentine Orrice each 4 ounces, middle rind of Elder 2 handfuls, *Winter's bark* 2 ounces, the outer rind of 4 Oranges, 3 Lemons, fresh Juniper berries 4 ounces, when they are shred and bruised, pour to them of Rhenish Wine 4 pounds, Wine of the juice of Elder berries 2 pounds. Destil them the common way, let the whole water be mixt. The Dose is 3 or 4 ounces twice a day after a Dose of some Medicine prescribed before. Decoctions and Physick Ales may be made, as before prescribed, adding Antihydropsick Ingredients.

Of Rattling of the Bones.

There yet remains a Symptome, which sometimes, though rarely befalls a Scorbutick Person, to wit, the rattling of the Bones. I have known some, but not above 3 or 4, who having been a long time Sick of the Scurvy, have felt the hurt of it, not only in the Humours and Flethy Parts, but in the very Bones: For whenever they bended their Limbs any way, the heads of the Bones, when they rubbed one against another, made a rattling, as if they had been bare; furthermore when they lay down in their Bed, and turned themselves there from side to side, you might hear a great rattling from the Collision of the *Vertebrae*, as if you had been jumbling a Skeleton, which affrighted the Patients themselves. The conjunct cause of this perhaps might seem to be, because when the soft Interstice of the Bones, that is, the Fat, Membranes and Ligaments are much wasted, the junctures of them, like empty Mill-stones, make a noise by rubbing one against another. Yet it is evident, the matter is otherwise, for there is no such rattling of the Bones in extream Consumptive Persons, nor are they alwayes, that are troubled with this ail, Consumptive: Wherefore we must rather say, that the immediate cause of this Symptome is the dryness of the Bones, or want of the Marrow properly so called, which ought to be contained within the Cavity of the Bones, and especially in the heads of them; for seeing all bones owze out Marrow or some unctuous matter every where, either at their great Cavities or Pores and narrow passages, we reckon the use of this to be, as well that the Bones being irrigated thereby, may become less brittle, as more over, that this Humour owzing out at the Nodes of the Bones, may supple all the Joynts, and so facilitate their motion, as the joynts of Machins are greased with fat; wherefore the heads of the Bones, being destitute of this Marrow, make a noise like Coach Wheels, when they are seldom greased. But if you will inquire into the Procatartick cause of this Disease, why this unctuous obliniment of the Joynts is deficient: This indeed must be imputed either to some fault in the Blood, as if it did not duly supply the Bones with aliment

partaking of Sulphur as well as Salt; which indeed is not very likely, because the mass of Blood even in Scorbutick Persons, contains particles of both the foresaid kinds, and besides, they that have this rattling of their Bones, do shew a Skin and Muscles full enough of fat. Or secondly, it rather seems that the unctuous Humour, wherewith the Joynts are supplied, is wanting through the fault of the Bones themselves, because, to wit, their Pores and Passages are so obstructed by some extraneous matter perhaps dreggy or tartareous, carried by the Blood, that they do not sufficiently receive the Balsame designed them, nor does it ouze out to moisten their Joynts. Nor will it be easie (because the matter is wholly in the dark) to inquire the particular reasons of this Ail; nor to proceed in this Aitiology beyond such a conjecture as this. Nor are we left at a stand, when we come to the cure of this Disease; for although the primary Indication, that is, the moistning of the Bones and Joynts be obvious enough, yet in what manner and with what Remedies it may be done, it does not so plainly appear. For in this Case I have known several Sorts of Medicines, and various modes of administration tried altogether to no purpose. A certain ingenious Person, who had been most grievously troubled with this Disease for many years, tried the advice of many and indeed Famous Physicians, beside the usual Remedies, for the Scurvy (together with frequent Bleedings and Purgings, whereby he found no relief) he moreover tried various and great courses of Physick, without any success at all: for after he had tried one Physicians method for some Months to no purpose, he by and by betook himself to another, and so afterwards to several: In the mean time a new method was always prescribed by each, not tried by the former, Fomentations, Liniments, and Frictions are daily applied to all his Joynts. One while he goes to Bath; then he drinks the Waters sometimes one, sometimes another. Which doing no good, he takes a Chalybeate course, then a Decoction of the more temperate Woods, then a Milk diet, further, he was always taking Eleſtuaries, distilled Waters, Apozemes, and other Remedies made of Antiscorbuticks: And when he had in this manner for above 3 years constantly almost, lived Medically and miserably; he was not a jot the better, as to the Cure of his foresaid Ail; but in the mean time he was pretty strong and had a good Stomach, he Married a Wife; and as to the other more common Symptoms of the Scurvy he was better: Hence you may see how pertinacious a Disease the rattling of the Bones is, and that it scarce gives way to any Remedies, which I have experienced in others who have been ill of this Disease, and have wholly eluded all the pains of the Physician.

Idem.

XIV. We have already largely explained both the preservatory and curatory Indications, which concern the Cure of the Scurvy. It yet remains to speak of the Vital Indication, that is, to declare in what method, and with what Remedies the Patients strength, when apt to sink, may be supported, or when decayed or spent, may be restored. For these ends Cordials and Opiates must be prescribed to be taken, according to the Patients exigences, and moreover a restorative course of Diet, if at any time it be necessary, and ever Antiscorbuticks must be prescribed. As to Cordial Medicines, which put the Blood stagnating in the Heart, in motion, kindle its flame half put out, and restore animal Spirits oppressed or distracted, to their due liberty and irradiation; it is obvious that several Medicines, properly called Antiscorbuticks, do perform these intentions, such are namely *Aqua raphani composita*, Snail water, and *lunbricorum Magistralis*, Spirit of Harts-horn, Soot, testaceous powders, and many other things, which may be taken not only

at certain hours, and according to the method and order prescribed, but as there shall be occasion, whenever swooning and fainting happen, and with good success. Yet besides, they that are observed to be very subject to passions of the Heart, frequent swoonings, loathing, vomiting, trembling, Vertigo and other horrible Symptoms, should also have ready other manner of Medicines, which are more properly called Cordials, whereby all sinking of the Spirits may immediately be relieved. To this purpose these things are very proper, *Elixir vite Qu. majus*, the second water in distilling of the said *Elixir*, a spoonful of it may be given sweetned, also *Aqua Mirabilis*, *Aqua Bezoartica*, *Aqua Gilberti temperata*, Treacle water, Cinnamon water; to each of which, or compounded one with another *Confessio Alkermes*, *Confessio de Hyacintho*, powder of Pearl, or magistery of Coral, Syrup of Clove-gilly-flowers or of Coral, or of Citron rind, or of Cinnamon may be added. Of these and other such sort of Medicines divers forms may be prescribed, for example, Take of Treacle water, *Mirabilis* each 3 ounces, Balm 4 ounces, Syrup of Clove-gilly-flowers 1 ounce and an half, *Confessio Alkermes* 1 drachm. Mix them. The Dose 3 or 4 spoonfuls. Or, Take of *Aqua mirabilis* 6 ounces, Snail and Walnut water each 2 ounces, powder of Pearl 1 scruple, *Confessio de Hyacintho* 1 drachm, Syrup of Clove-gilly-flowers 1 ounce. Mix them. When Scorbutick Women are troubled with Hysterick Fits, and Men with Convulsions, Take of Water of Balm, Pennyroyal each 3 ounces, Compound water of Briony 4 ounces, Tincture of Castor half an ounce, Tincture of Saffron 1 drachm, Syrup of Glove-gilly-flowers 1 drachm and an half, of Castor tied in a rag and hung in the Glass 1 drachm. The Dose 3 or 4 spoonfuls. For them that desire their Cordials rather in a solid form, Eleſtuaries or Lozenges may be prescribed; Take of *Flos tunice* 3 ounces, *Confessio Alkermes* half an ounce, powder of Pearl 1 drachm. With a sufficient quantity of Syrup of Corals, make an Eleſtuary. Take of *Species diamantharum frigid. diarrhodon Abbatis* each 1 drachm and an half, powder of Pearl 1 drachm, whitest Sugar dissolved in Treacle water and boyled to the consistency of Lozenges 4 ounces, oyl of Cinnamon 6 drops. Make Lozenges according to Art. As for Opiates and Anodyne Medicines, in some ails of Scorbutick Persons I had rather be deprived of any sort of Medicine beside, than of the use of them: for I have not found a more excellent Remedy not only for pain and pertinacious watching, but in Asthmatick Paroxysms, Vomiting, Looseness, and also in the Vertigo and Convulsive passions; whenever nature is beyond measure irritated, than to procure Sleep by giving a safe narcotick. In the mean time great care must be taken, not to give them, if any thing in the constitution of the Patient, or in the condition of the Disease, or time, forbid the giving of such a Medicine. Beside the usual Hypnoticks in Dispensatories, to wit, *Laudanum opiatum*, *Nepenthe*, *Philonium*, *Diacodium* and Syrup of red Poppy, I know moreover two preparations of Opium, which I use to give in form of a Tincture or liquid Extract from 10 to 20 drops in some appropriate Liquor. The diet or course of Life, to be observed by Scorbutick Persons, is of very great moment in the method of Cure; which if neglected, or managed amiss, other prescriptions of Physick conduce little or nothing to health. A dietetick regiment extends to divers things, but it is especially concerned about Air and the site of ones Habitation, meat and drink and motion and rest of the Body. As to the first, such Mansions and Places of Habitation as in respect of the Air or Soil breed the Scurvy, must be avoided, they that desire either to cure or prevent this Disease, must make it their business to chuse an Air moderately hot and dry, which also must be thin and pure, and sufficiently eventilated.

Meats

Meats of good juice and of easie Concoction are proper, the gross and viscid, mouldy and rusty, also unfermented food, or much compounded, pulse, Milk meats, unripe fruits must be avoided. I am so far against all things preserved in Sugar, and that have much Sugar in them, that I think the invention of it and its immoderate use has contributed very much to the vast increase of the Scurvy in this last age: For this Concrete consists of a very sharp and corrosive Salt, yet allayed with Sulphur, as appears plainly from the spagyricall Analysis of it. For Sugar distilled by itself yields a Liquor scarce Inferior to *Aqua Stygia*: And if you distil it in a Copper Still mixt with a great quantity of fair water, although the fixt Salt ascend not so much; yet a very hot and pungent Liquor will come over like the strongest *Aqua vite*. Since therefore we eat such a quantity of Sugar mixt with almost all our Viſuals, it is very likely, that by the daily use of it, the Blood and Humours are made Salt and sharp, and therefore Scorbutick. A certain Famous Author has ascribed the cause of the Consumption in England to the immoderate use of Sugar among us: I know not, but that the cause of the frequent Scurvy may rather be derived from hence. Let the drink be midling Beer, mild and well clarified, and besides altered with Antiscorbutick Ingredients, without an ingrateful tast; it must not be thick and sweet, nor over stale and fower: This may be drunk in a moderate quantity, and almost only at set times of Dinner and Supper. The custome which has prevailed among many, that when they get out of their Bed, they immediately take a large Mornings draught (as they commonly call it) which is very pernicious. For by this means, seeing the Sanguiferous Vessels are over filled, with a stock of fresh Chyle, poured in almost at once, and Crudities and Morbifick faculties are bred in the Blood, and the Sanguifick faculty is much weakned, truly it were better for most Men (unless they whose Stomach, while it is empty, uses to be troublesomely Contracted and Corrugated) to fast till Dinner. Nor is the common custome, of Mens swilling their full Cups immediately after meals, less pernicious. Wine and Syder, so they be mild, sincere and not adulterated, taken in a moderate quantity do no harm, but if they be adulterated, roapy, harsh, or cagre, nothing is more hurtful, and injurious to our health. Exercise and Labor are of such excellent benefit as well for the cure as prevention of the Scurvy, that many either preserve or recover their health by this Remedy alone: For the Blood and Nervous juice of such as are idle, and lead a sedentary life, like standing waters, contract slime and filth. But by the constant and much exercise of the Body, the Humours and Spirits grow clear and vigorous, the excrementitious and heterogeneous particles evaporate, the obstructions of the inwards are opened, and their tone is strengthened.

Medicines especially made use of by eminent Physicians.

1. When I could get no constant ease, at last I took some Cream, Chamomil flowers, Water Cresses and Juniper Berries boyled in Milk, and applied the Cataplasin hot, and by Gods blessing I think I have found a Panacæon for all Scorbutick pains. ¶ Take of Elder flowers 2 handfuls, boyl them in Wine, add 2 drachms of Soap, and make a sufficient quantity of lye, a cloth dipt in which, and applied, mitigated the pain powerfully.

2. For a painful Scurvy. All things premised that should be premised, let a Decoction of Worms be taken to cause a Sweat, afterwards let the joynts be rubbed with this Spirit. Take of

Flowers of Lilly Conval 2 handfuls, Rosemary 1 handful, Castor, Seeds of Scurvy-grass each 6 drachms, Rocket half an ounce, infuse them in the best rectified Spirit of Wine 8 ounces; set them in the Sun for 3 dayes, strain them out well, add of Spirit of Worms 2 ounces and an half, Camphire 1 drachm and an half. Mix them, with these things I have successfully Cured Scorbutick Gouts.

3. Our Syrup for the Scurvy is made of juice of Brooklime and Scurvy-grass with Sugar. I have not found a better Medicine for the Scurvy. ¶ For the pain of Scorbutick joynts, I applied a bag full of roasted Salt, roasted Millet, Bran and Chamomil Flowers, and when the Bag was applied the pain ceased as if it had been charmed.

4. The Essence of wild Pine; Take of the tender Branches of wild Pine or Fir a sufficient quantity, boyl them in a sufficient quantity of common water for an hour or two. Digest and thicken the Colature to the consistence of an Extract, pour to it Spirit of Scurvy-grass or of some other Antiscorbutick Herb, afterwards digest and filtre it, and you will have an Essence. The Dose whereof is from 20 to 30 grains in a due Vehicle. It is highly commended in the Scurvy and Contracture.

5. Wall Rue has an excellent efficacy in Curing the Scurvy, with which all the Soldiers having the Scurvy, who were besieged in a certain Castle, were cured. ¶ An Infusion of Brooklime and Scurvy-grass in Whey of Goat's Milk, is a vulgar Medicine, but does truly a great deal of good in the Scurvy. ¶ Goose dung is also commended in this case, from the juice of which Soldiers troubled with the Scurvy in a Siege, found great relief.

6. This is a Secret, Take of the middle yellow rind of the root of Sloe-Tree 4 handfuls, Pepper powdered 2 spoonfuls, boyl them with Beer and Water, with this Decoction hot wash the Mouth, repeating it several times, then Take of the juice of Water-Cresses, pour to it some Wine, mix them, and keep them, wash and rub the Mouth and Gums often with this. ¶ Take the juice of Squills, rub the Teeth and Gums, so the Scurvy is cured.

7. Among Diureticks, which are used for the Scurvy, *Penotus* his opening Spirit bears the Bell from all others. I make it thus, Take the Spirit of Goslarian Vitriol 3 pounds and an half, Salt of Tartar 2 pounds and an half, calcined Flints 6 pounds, put them in an Earthen Retort and destil them, increasing the Fire by degrees; let the caput mortuum be boyled, and the Spirit be impregnated with the Salt when it is boyled out, of which and Potters clay make balls, which being put again into a Retort, let them be destilled, and the destilled Spirit be rectified and kept for use. ¶ *Cuesellius* thus prepared his Narcotick Arcanum; Take of Vitriol finely pulverized, and dried in a certain heat to whiteness half a pound, pour to it 30 ounces of rectified Spirit of Wine, set it in Horse dung for a Month, when it is poured from the Dregs, distil it in *Balneo Maria*, till the residue of a yellow Liquor, like the distilled Oyl, keep this, when it is cast forth. This is far better and safer, as the Author affirms, then *Laudanum Opiatum*. The Dose is 12 grains in some convenient Liquor.

8. The common People in Holland commend a well known and easie Medicine, made of the Leaves of Marsh Trefoil, for most Scorbutick Persons, especially such as are inclined to the Dropsie, with very good success. I gave to a certain Scorbutick Person, who had a Palsie, Consumption, and Spots, an infusion of marsh Trefoil, by the use of which alone he was perfectly well in 14 days. I have done the same in others.

(See before § XII, XIII, XIV. *Willis* his Cure of the Scurvy.)

Scroti Gangrena, or a Gangrene of the Cod.

A Man about 40 years old, being drunk with Wine, fell suddenly into a swelling of his Cod, with an acute Fever and a sudden failure of Strength, he got a Surgeon to cure it, who when he observed the blackness of that Part and the exulceration of the whole Penis, yea and danger, because there was a manifest Gangrene, being doubtful of the Cure, desired the advice of a Physician. When I was called, having first given him a Clyster, because he had not been at Stool for 2 days, I prescribed him a Cataplasim of Scordium, Rue, Meal of Lupines, and of Bitter Vetch, with Oxyssel, Wine, &c. I gave him *Diasenna Fracassorii*, and now and then Treacle-Water, because I observed some Malignity communicated to the Heart; for without it he could scarce breathe. The next day when we took off the Cataplasim, we found the outer Cuticle separated, and the third day the *Scrotum* open of it self: and about night ten pounds of Water run out. The fourth day his Stones were all bare, for the *Scrotum* was fallen away from the *penis* to the *perineum*. Here we advised, what should be done, and by drying and incarnating Remedies we prevailed so far in 14 days time, that we had not only guarded the Stones, with a *Scrotum*, but Nature also had clothed the *Scrotum* with new hair, the whole *glans* came again to the *penis*, all the Ulcers of the *penis* were healed, and he was able afterwards to act the part of a Man.

One forty years old, a strong Man and of very good habit of Body, when in Summer-time he had heated himself excessively, and had drunk a great draught of cold Water, was within a few days taken with a continual Fever, of which he was rather cured by the benefit of Nature than by Art, in the mean time the intemperature and fault of his Liver remained, wherefore a little after he fell into a Cachexy, for he was first taken with a Jaundice, then with a Dropsy. Dr. *Cronenburgius* used all things necessary; at last a serous Humor falling into the *Scrotum*, they called Dr. *Slotanus* to consult: Both of them use their utmost Industry, in the mean time the swelling of the Cod ceases not, but by degrees the Native heat being extinct, it turns to a Gangrene in the Part. They scarify the *Scrotum* all over with a Lancet, and wash it with Salt and Treacle dissolved in Vinegar, not neglecting *Unguentum Aegyptiacum*, and a Cataplasim, of meal of Lupines, of Darnel, Aloes, Myrrhe, *Scordium*, and other things that resist putrefaction. They prescribe a very good course of Diet, Strengtheners and Openers of obstructions, inwardly and outwardly: In the mean time, when the Water ran plentifully out of the *Scrotum*, the Patient grew better. At length the gangrened *Scrotum* part of it fell away by the benefit of Nature and Medicines, part also, which was gangrened, was cut off with a Razor, so that the Stones might be seen bare, the Ulcer remained open for some Months. In the mean time Nature by this way evacuated whatever excrementitious Humors were in the Bowels, so that the Noble Parts were perfectly restored, and the Patient fully cured of his Disease.

Petrus Holt-
zemius.

Fabritius
Hildanus.
Cent. 5.
Obs. 77.

Singultus, or the Hickup.

The Contents.

The Cure must be varied according to the variety of Causes. I. A Periodical one, which would only give way to Bleeding. II. A Tedious one stop. III. The Efficacy of Opiales. IV. To what Place outward Applications must be made. V. Antimonial Vomits are best in this Case. VI. Vomits repeated do good. VII. Medicines.

I. B. Sylvaticus, gave to one, that had had the Hickup grievously for seven days, *Hiera Rhodius* with Oxyssel: when he had voided above 12 ounces of Phlegm, he was perfectly well. ¶ Several who have been almost killed with the Hickup, after purging for 5 days with *hiera picra*, have put an end to the Hickup. ¶ One who had had the Hickup 20 days and was in great danger of Death, was at length saved by an infusion of *Mechoacan*. ¶ A Boy ten years old, Hickuped day and night for 8 days, I gave him water of Green-Nuts, distilled with Radish first steeped in Vinegar. Although he did not Vomit, yet his Hickup ceased; after the second Draught about night he was wholly freed of it. ¶ A Surgeon falling Sick was in a little time so troubled with Hickuping at turns day and night, that he could neither Eat, Speak nor Sleep as he ought: When he had taken a strong Chymical Vomit, he at several times voided a vast quantity of æruginous and black Choler; and his Hickup wholly ceased. ¶ A Colonel, when he was exceeding Hot, quenched his Thirst with cold water, mixt with Nitre, a good quantity at once, upon which he fell into a violent Hickup. The Water was thrown off by a Vomit; Stomach-Water was given him; a Cataplasim of Stomachicks was applied to his Stomach; at length when some *confectio anacardina* and *lignum Aloes* was given him, he left Hickuping the third day. ¶ A Girl thirteen years of Age had been afflicted a whole year with a very troublesome Hickup: the Symptome had troubled her the whole foregoing Winter, she was free of it in the Summer, about Autumn it came again with its former Cruelty. I gave her of *Calomolamos* 16 grains, of *Diagridium* 8 grains, that day her Disease was taken away. ¶ A Man of 40 years old was taken with an Hickup, which was attended with strange Symptomes. In the Dog days he had so swilled himself with cold water that through the immoderate Cold, he fell into the Convulsion of the Stomach. After I had tried all manner of Remedies, I thought a hot Bath might correct this intemperature: From which, being made of Bay, Wild-Time &c. he received such benefit, that within 5 days he was well. In the mean time a Bag was applied to the region of his Stomach in which the foresaid Herbs were put. ¶ N. being sick of a Malignant Fever was tormented with a grievous Hickup: having tried several things I prescribe 2 grains of *Laudanum* with an Emulsion of the 4 Seeds, wherein a drachm of *Sal prunella* was dissolved. Within an hour the Hickup ceased and returned no more. ¶ I cured one that was ill of a grievous Hickup with one Draught of Seed of Dill, Carroway, Purslain, and white Poppy boyled in Small Beer. ¶ *Erysimachus* the Physician cured *Aristophanes* of the Hickup by Sneezing, when he could not be cured by holding his Breath. ¶ *Rainutus Farnesius* being almost killed with a deadly Hickup, was cured by applying a Weather new opened to his Stomach. ¶ A Severinus young

Rhodius

Daretus

Epiph

Ferdinandus

Platerus

Idem

Timaeus

Riverius

Idem

Idem

Forestus

Plato

young Man having wrenched the eleventh *vertebra* of his back, which is over against the upper Orifice of the Stomach, was grievously afflicted with a perpetual Vomiting, and there was no place for Remedies. ¶ The Sympathick Hiccup, which arises from Sympathy with a Rupture incarcerated, and is often attended with black Vomiting, follows the Patients till Death, and is not curable but by restoring the Rupture. The same judgment may be given of an Hiccup coming upon an Inflammation of the Liver. ¶ One that had been vext 3 whole Months with the Hiccup, could not be cured with any Remedies, till the extremity of his Rib, which was found turned in, and run into the Stomach without any sense or pain, was gently raised. ¶ One that had the Hiccup from Windiness, recovered by this following Remedy, Take of *Philonium* 1 scruple, *diagalanga* 2 scruples, give it in Wine. This did another good; Take of the best Treacle 1 drachm, powder of Dittany half a drachm, give it with a little Wine. ¶ A Hiccup in Feavers sometimes follows the intemperate use of cooling Juleps, as I have observed several so held through the unadvised Rashness of their Physicians; and I removed this Symptome, contrary to the Opinion of them all, by drinking Wine.

II. A Maid, healthy in all other respects, was commonly once a year for the most part at one set time afflicted with a Pertinacious Hiccup, that despised all Medicines. At length a Remedy was found, bleeding freely in the Arm. It may be, because some Flatulent thing, joyned with something sharp, which disturbed the Blood-vessels of the Diaphragm, and by consent the Nerves also, might find a Passage by opening a Vein so near.

III. I have several times cured even the most Contumacious Hiccup with this Mixture; Take of Quince Wine, Tincture of Roses each 1 ounce, Syrup of Quinces half an ounce, Extract of Zeodary 15 grains, distilled Oyl of Orange-Peel 4 grains, *Laudanum Opiatum* 4 grains. Mix them. The potion must be taken by spoonfuls.

IV. Opiates above all things conduce to the cure of any Hiccup, not only as they qualifie all sharp Humors, but more over as they obtund the sense of the Stomach, and it may be, also make the Animal Spirits more torpid to Motion, if so be they be used by turns in a small quantity, and so long, till the Hiccup either cease or be notably diminished; for example, Take of Mint Water 2 ounces, simple Treacle-water half an ounce, *Confessio Alkermes* 1 drachm, *Laudanum Opiatum* 2 grains, Syrup of Mint 1 drachm, Mix them. Give a spoonful.

V. *Galen* §. de loc. affect. c. 4. sayes, that Patients sometimes perceive a weakness of the Gullet, when what they take is a long time and with great difficulty in getting down the Gullet to the Stomach, which sometimes at the first essay get down easily, then again they are forced down, as if they stuck, like as when one has eaten sowre Pears, which by their stypticity straiten the Gullet lying on the Back, and hinder the going down: Then if they be clapped on the *vertebrae* of the Back with ones Hand or between the Shoulders, upon which the Gullet rests, whatever sticks is forced down into the Stomach, whereby at length the *larynx* is dilated and can take in the Air freely. Therefore the Ancient Physicians were not amiss, who, when they were to cure the Hiccup, or any diseases of the Mouth, of the Stomach or Gullet, made not their outward Applications to the *Epi-gastrium*, but applied them to the Back and *vertebrae* of the Neck, which *Aetius lib. 15. c. 147.* very learnedly teaches, If, saith he, the Hiccup be continued, we must use Sneezing and Cupping-glasses also over all the Spine, and especially about

the greater *vertebrae* of the Diaphragm, that is, the 12th and 13th *vertebra* of the Back, and draw it to the Spine: For the continual application of Cupping-glasses, often rectifies and opens the Mouth of the Stomach, contracted and as it were obliquely twisted by the Hiccup. It is also very good to bind the extreme Parts and dip them in Water. This Doctrine of *Aetius Galen* maintains by an agreeing suffrage 11. *Metb.* I call the Gullet in this place the Stomach, saith he, which the Greeks properly call the Stomach; sometimes also they so call the Mouth of the Stomach, as when they say, A Man swoons stomachically. But we apply a Cataplasim for the Gullet, which is properly called the Stomach, to the Spine and not to the Breast. We do the same also, when the Mouth of the Stomach has an Inflammation, because it rests upon the Spine, along the Neck and Breast to the Belly. Wherefore Nurses, when Infants and Children are troubled with Vomiting and Turning of the Stomach, they think the Gullet and the Mouth of the Stomach are convulse, and they set a Cupping-glass to the Belly, and they garter up the Skin about the twelfth *vertebra* of the Back, they take it in their Fingers and lift it up; or they force it into a Cupping-glass or Jug with Tow kindled, as *Aetius* does, which one would think succeeded well, and the Vomit stopt because the Gullet and Mouth of the Stomach were restored to their former seat.

VI. As often as hurtful or sharp Food or Physick, or rather Poison is contained in the Stomach, and causes the Hiccup, it ought to be expelled either by Vomit, upwards, a shorter way, or by Purging, downwards, a longer way, which may be understood also of any Humours in the Stomach or small Guts, which cause the Hiccup. I prefer among Vomits, Antimonials before all the rest, both because they do with success evacuate all Humors promiscuously; and because they are most amicable to Humane Nature, reducing all the Humors in Man by some peculiar way to a very laudable State by degrees; if so be that too great a quantity of them be not taken at once.

VII. When after Narcoticks have been conveniently used, and a Vomit taken, and little or nothing is voided upwards or downwards, and the Hiccup continues; if the signs of bad Humours being in the Stomach or in the Guts nigh, which cause this Ail, you may then safely either the same day, but in a less quantity, or the next day in little a larger quantity give a Vomit; to the end the peccant Humors may either be further corrected, or discharged upwards or downwards or both ways. For so the cure of the Hiccup will be performed safely, not unpleasantly and soon enough, which is truly rational and dogmatical, relying especially on Experience, and on sound Reason, not on a faint and commentitious one, and therefore on a false one.

Medicines especially made use of by eminent Physicians.

1. There are many who by affrighting People unawares in the Hiccup, obtain their end; others advise to rub the Ear long with the little Finger. And *Zysimachus* has given out, that Sprinkling with cold Water and holding ones Breath, stops the Hiccup.

2. Among the stronger sort of Remedies for the Hiccup, there is Powder of Dittany (if it arise from Cold or Wind) with Cretan or Falernian Wine. But a Decoction of Dill, about 3 Glasses of it drunk at once, wonderfully stops the Hiccup with pain.

3. This

Pod. à Fon-
feca.

3. This Fomentation is very good, if Castor, Pepper and Mustard boyled in strong Vinegar, be applied with a Sponge to the Stomach.

Lat. à Font.

4. This is Asepius his famous Remedy: Take of Galangale, Saffron, Spikenard, green Roses, Marsh-mallows, each 4 scruples, *Afarum*, Aloes each 2 scruples, *Opium* 1 scruple, with juice of Fleawort make little balls. The Dose 1 scruple every Morning.

(See s. 1. of the Hickup.)

Sitis, or Thirst.

The Contents.

The Method of cure is not alwayes the same. I.
Sweet and Sugared things increase rather than quench Thirst. II.
The use of Nitre. III.
Medicines.

I. **T**HIRST is a Passion of the Mouth of the Stomach, which is sometimes afflicted by Sympathy, sometimes by it self: If by it self, all agree it must be removed by drinking: If by Sympathy with the Lungs, not drinking of Water, but inspiration of cold Air alone is sufficient to assuage it. Nor is it sufficient to know that the primary Affection is in the Lungs, and the consent in the Stomach, we must consider also, whether the Thirst, that is caused in the Stomach, be proper by consent, so as that it be partly caused, and partly causing by reason of the Fomenting it by the Lungs: for not only Coolers and Moistners should be directed to the Lungs, but to the Stomach also. Continuance of time and a soft habit declare that an Idiopathy is made: Because that all Sympathy, if it continue long, and the part affected be lost, becomes Idiopathy. ¶ The Hermetick Physicians contend that immoderate Thirst comes from thirsty Spirits, bred of sulphureous Impurities, which will not be sated with simple Cooling and Moistning, but with other Spirits analogous to themselves: Thus we see in Ague-fits, intense Thirst is a little stopt by drinking a great quantity of Water, which yet more easily gives way to acid Spirits of Vitriol, Sulphur, Salt and the like, mixt with a far less quantity of Water. ¶ If an irregular Thirst arise, such as is usually caused by the Dropsie, while the Stomach receives Nitrous, Salt, or a Putrid, Vapor or Humor from the *Peritonæum*, it cannot be stopt by drinking (but the plenty of the Salt or Nitrous Humor will be increased, whereby it is also increased and exasperated) but by such things as dull the Sense of the Mouth of the Stomach, or qualifie and make gentle the Humors and Vapors; so Starch and the Water of it, so Mucilages, and sometimes fat Things, do good to Admiration: But when the faulty Thirst comes from the heat of the Lungs, you may cure it by inspiration of cold Air and often Washing the Mouth with very cold Water. ¶ Both watry things, which dilute and carry to the Urinary Passages the lixivious Salt of the Bile, and Acids, which powerfully break and turn its Acrimony, and Oily things which smooth the same Acrimony, to wit, Milk and Emulsions made of Oily Seeds, cure increased Thirst above all other things: And the Watry things may conveniently be joynd both with the acid and Oily ones, and so they will do the more good. ¶ It sometime happens that Thirst is increased by the *Serum*, where, because Water abounds in the Body together with the lixivial Salt, plentiful drinking is not convenient, but an acid Spirit, such as Spirit of Salt, *aperitious Penoti*, &c. diluted, taken by

spoonfuls, whereby the hurtful Acrimony of the lixivious Salt is powerfully amended. ¶ The Cause of it is the Nidorous ferment of the Stomach, made over salt and sharp, as we see it happens in Feavers, Salt Catarrhs, the Dropsie, &c. The Stomach, since it has a Coat common with the Gullet and Palate, easily communicates its Quality to them, and also causes Thirst. Want of Moisture is not sufficient to cause Thirst, wherefore Thirst ceases not by drinking, unless it carry along with it a *Medium*, Analogous to seize the ferment; Wherefore Acids quench a false Thirst, just as Water quenches the Fire. Well rectified Spirit of Vitriol, Spirit of Sulphur and the like ease Thirst in Fevers. It quenches Thirst to shut ones Mouth, hold ones Tongue, and to take the cool Air and Drink. ¶ For the same Cure will not serve all sorts; For that which is caused by the heat of the Lungs and Breast, the inspiration of cold Air is fitter than Drink, and that rather very cold, than much of it. ¶ If Thirst come through the fault of the Reins, as it does in a *Diabetes*, I think you cannot use a better Remedy in this Case, than one that causes rest, or stupifies, or at least lessens Sense. So for such this is good, to take every other Night an ounce and an half of Syrup of Poppy with Barly water or a decoction of Mallows. To which purpose it is good also to lick some of the same in the day-time. Syrup of Purslain is also good and *de mucilagibus*, and whatever takes off the sharpness of Sense. ¶ Although *Hippocrates*, *aphor.* 24. *sest.* 5. seems to forbid Milk to the Thirsty, yet it must be understood of them only who are excessive Thirsty through too much Heat: and a mass of putrid and cholerick Humors in whom Milk is easily corrupted, and not of them who are Thirsty through Heat and Consumption; for in the same Aphorism he allows Milk to Hectick Persons, though in a Fever. *Galen*, l. 7. *Metb.* prescribes the use of Milk and the warm Bath to hetticks.

II. They are in an Error, who, when they see sick People almost killed with Thirst, give them things candied with Sugar, and Conserve, as of the Sowr part of Citron, &c. which although perhaps without Sugar they might quench Thirst, yet with it they will never quench Thirst. Children know that Sugar increases Thirst: It is better to take nothing at all, because if the Tongue were not fouled with these sweet Things, it would not for some hours be so Thirsty. Therefore I wonder, that Physicians, though they see it daily, do not abstain from it.

III. Nitre and *Sal prunellæ* have a Virtue to quench Thirst and Heat. *Hartman* in his *Praxis* mixes 1 ounce of it prepared with a pint of Liquor or Water, for a drink for Feaverish Persons. I scarce go above 5 scruples, for it weakens the Stomach a little, and therefore sometimes causes a Looseness; but it may be given from half a drachm to an whole one, without harm, especially with Sugar, whereby its bitterness is mitigated.

Medicines especially made use of by eminent Physicians.

1. Linseed, and Quince seed tied up in a rag like a little Ball, and steeped in Violet water, if it be held in the Mouth, wonderfully quenches Thirst.
2. These Pills wonderfully quench Thirst; Take of seeds of Melon, Cucumbers, candied Lettuce-stalk, *Diacodium* in a solid Form, and Sugar 2 drachms, Sacch. candi violat. Trag. each 1 drachm. With the White of an Egg make Pills. Hold one under the Tongue, and let it dissolve by little and little in the Mouth and then swallow it. ¶ Pieces of

Idem,

l. 2. c. 4.

Hippocrates.

Vallesius, 6.

Epid. 3.

Mercator.

Varandæus

trait. de ven-

triculo Mor-

bi, p. 102.

Sanctorius

Meth.

l. 13. c. 2.

Schroderus

l. 3. cap. 23.

Alex. Bene-

dictus.

of Water-Melon held in the Mouth are highly approved to quench thirst in a Pestilential Fever. Some also, as a Secret, hold water with as much Vinegar as the Patient likes, in the Mouth, and give them to drink.

Eustach.
Rudius.

3. The heat of the Body and of the *Præcordia* must be quenched with Epithemes, whereby I have oftner with success cured thirst, than with internal things. For by applying juice of Cichory, Endive, Purslain, &c. with Vinegar and *Spec. diatriæ* on *Santalum* to the region of the Liver, and often repeating it, I have done a great deal of good.

Here.
Saxonia.

Sinus, or a deep running Imposthume.

(See *Fistula* Book VI. and *Ulcus* Book XVIII.)

Somnus preter naturam, or Præternatural Sleep.

(See *Lethargus* Book X.)

The Contents.

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Compounded Aqua Vitæ must be given with great care. VIII.

I. Sometimes in great want of rest, sleep is so long prolonged, and so sound, that it may seem a sleepy Disease, and deceive the Physician both in length of time and deepness of the sleep, as in those that are over tired, or have over watched, or over wrought themselves. So I saw one who after he had lain sick 34 days, and had not changed his Linnen all the time of his Disease, when he had changed it, and was laid in a soft and clean Bed, slept 36 hours continually. He was thought to be carotick, but he was not so; for at length he awaked, took meat, and the next day was well.

Indovicus,
l. 1. cap. 2.

II. To open the outer jugular by a Skilful Surgeon, is good in sleepy Diseases, and is proved from many Histories. Some prefer 2 or 3 Leeches applied along that Vein, to the angle of the lower Jaw, where it stands up and may be seen.

Riolanus.

III. In deep Sleep it is good to eat Cresses either boyled in Broth, or raw in Sallets: for there is nothing dries the Brain more than Cresses: whence came the Proverb to drowzy Persons, go eat Cresses. Where I cannot but wonder, why *Fernelius* cap. 2. lib. 2. *Pathol.* writes that Cresses cause Sleep.

Rondeletius.
cap. 19.

IV. Drinking of Coffee, seeing it is very effectual in keeping off drowziness, something must be said here of its effects, and the reason of its working. From the Eastern People, to whom it has been long ago familiar, it is become customary among us. I think the nature of it consists in this, that it presently communicates its adust particles (with which it abounds, according to both its taste and scent) to the Blood, and then to the Nervous juice, which therefore by their incongruity and mobility or restlessness do both keep open the Pores of the outer part of the Brain, and add certain goads and

pricks to the Spirits, which are deprived of any other chain or torpidness, whereby they are the longer excited to perform their offices. For to fall asleep these two things are necessarily required, of which sometimes the one, sometimes the other is the greater sharer in causing it: Namely, all the Pores and Passages of the out part of the Brain, must be very much stuffed and filled, from the Liquor which overflows there out of the Blood, and therefore must be stoppt: Then besides, to accomplish this effect, it is necessary that the animal Spirits, being excluded from these passages, and moreover oftentimes loaden with nutritious and serous Particles, must betake themselves to the middle of the Brain there to lye quiet. In the performance of these tasks necessary to Sleep, the order is not alwayes one and the same; for sometimes the Animal Spirits do first and of their own accord forsake these spaces, the Nervous juice running immediately into the vacant places: And sometimes the Nervous juice mixt plentifully with the Serum first invades these passages, driving thence the Spirits, though against their will, and forcing them inwards. But the operation of Coffee seems contrary to both these effects: for immediately upon drinking of it, its adust Particles, that are very nimble and restless, being carried into the Blood, do put its Liquor a little in fusion and force the serous Liquor to the Kidneys and habit of the Body: Moreover when they arrive at the Brain, they easily open its Pores, which by their mobility they keep very open; whilst they joyning with the Spirits, despoyl them of all their other Particles, as well Sleepy as Nutritious, and so being light and fleet do put them every where into motion, and cause them to be expanded through the whole compass of the Brain, when it is free from all gravative oppletion and obstruction. Yet in the mean time while the Spirits are in this manner constantly and unweariedly exercised, the Nervous juices are deprived of access and assimilation, their stores are not sufficiently and after their wonted manner recruited, indeed the old Spirits are rendered more nimble and unwearied, but the recruits of new ones are diminished. Hence it may most easily appear, that this drink, though in common use, and in some cases very useful and medical, perhaps in others is hurtful and not so wholesome. And that the matter is so, not only reason but vulgar observation does commonly shew, in as much as excessive Coffee-drinkers oftentimes grow lean, and subject to the Palsie and impotency to *Venus*. The first effect is so frequent and every where known, that we only therefore forbid them the drinking of Coffee, because it inclines to leanness: Because, when the Blood by continual and too frequent use becomes sharp and retortid, it is therefore less fit for to nourish. As to the Diseases of the Brain and Nervous kind, I reckon, that when I am sometime called to cure them, no man prescribes it to be drunk so frequently, as I: for it is my custom to send them more to the Coffee-Houses than to Apothecaries Shops. Truly in most Cephalick Sickneses, that is, Head-ache, Vertigo, Lethargy, Catarrhe and the like, where there is a moist Brain, but a slowness and torpidness of the Animal Spirits, with a cold constitution, or not very hot, and a watry Blood, Coffee is often drunk with advantage: for drunk every day, it clarifies and illustrates both parts of the Soul, and dispels all mists of the Functions whatever. But on the contrary, they that are lean, and of a Choleric Constitution or Melancholick, who have a sharp and retortid Blood, a hot Brain, and too eager and restless animal Spirits, ought altogether to abstain from that drink, because it further perverts the Spirits and Humours, and renders them altogether unapt and unable to undergo any Functions. For I have observed many who have not had sufficient plenty of

Spirits,

Spirits, and besides troubled with the *Vertigo*, palpitation of the Heart, trembling of the Limbs or numbness, have been worse as to those Diseases upon drinking of Coffee, and have presently perceived an unusual languidness in their whole Body.

Willis.

V. A Maid about 20 years old, was about the beginning of Autumn held with a double Tertian for 12 dayes, and was cured of it by Remedies. Her Fits returned again, but some new Symptomes came in the Fit, namely, much Sleep, redness of Face, prominence of Eyes, a pricking pain in the left side, and a great difficulty in swallowing. I suspected an hysterick affection was complicated with the Ague fit, and I prescribed her hysterick Remedies, notwithstanding which, the Disease continued. After a few dayes the Symptomes returned without the Ague, which confirmed my opinion, for the pain of her left side went to her right, sometimes pricking pains appeared in divers parts of the *Abdomen*, with a pain in the Stomach, and loathing, and sometimes a Fit of the Mother. Before the Fit came, she took by my advice 4 little Pills of *Laudanum*, and a little after, the Fit came; but within 2 hours, when the *Laudanum* began to work all things abated, she was well the whole Night, whereas the foregoing she had been tormented. Hence this Paradox may be gathered, that a Sleepy Disease may be Cured by the use of *Laudanum*.

Riverius,
Cent. 2. Obs.
26.

VI. In a *Coma* our chief endeavour must be, to prevent the efflux of new morbid matter into the Brain, and to discuss and get out what is got thither already. Moreover the animal Spirits must be awakened, and all torpidness and sleepyness taken from them: To this end we must Purge, Bleed, Cup, Blister, make application of revulsives and discutients, give Cephalick Medicines, and such especially as are indued with a volatil Salt, and use several other wayes of Administration. But if this Disease follow some other Sickness, or come upon any Man, whose Body is already much wasted, his Blood vitiated, or much depauperated, we must first consider well of Bleeding and Purging before we do either, nay, for the most part we must abstain from them: yet sometimes, that the conjunct cause of the Disease, or the matter fixt in the Brain may be put in Motion, it may be convenient to take away a small quantity of Blood, either by setting Lecches to the Fore Head or Temples, or by Cupping and Scarifying the Shoulders.

Willis.

VII. I saw a lusty young Priest taken with a *Coma* after a relapse into a Fever, with a tremor in one side, without sense, for want of Strength in the Parts. When he had taken a very sharp Clyster, with 3 drachms of *Coloquimida*, and 2 ounces of Honey of Roses and Salt in it, without any effect; *Prævotius* ordered him 7 Blisters, which doing little good, they proceeded to make a cautery in his Head behind, upon which he amended.

J. Rhodius,
Cent. 1. Obs.
26.

VIII. The strong scented stillatitious Liquor of Lavender rubbed on the Forehead and temples, revives those that are taken with a small *Catalepsis*, a *Hemiplexia*, and now and then with the falling Sickness, and oftentimes with Swooning. But where there is plenty of Humours, especially if they be mixt with the Blood, the use of this is not safe; nor of any composition drawn off Wine, in which such Herbs, Flowers, or Seeds, and certain Spices have been macerated, which most People give indifferently. For by the use of these hot things, which fill the Head, the Disease is increased and the Patient endangered, especially when Bleeding and Purging go not before. I thought fit to give this caution, because commonly some unlearned Physicians, and over bold Apothecaries do immediately give such Compositions and things of the like nature, not only to Apoplectick Persons, but also to those that are Sleepy and in a Fever, than

which nothing worse can be given, for they do a great deal of harm, and often kill the Patient.

Dodoneus,
pempt. 2. l.
4. r. 7.

Sterilitas, or Barrenness.

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Medicines.

I. Much is written by Hippocrates libro de Sterilibus, and in his Aphorisms of the causes of Barrenness, and of its manifold Cure: But *Scilicet*. 5. lib. 2. *Epidem.* all the Cures of these causes are in a manner reduced to these 2 heads, Fomentations, and Parges; The Barren, saith he, must Foment and Purge: for *σφοδρα* and *σφοδρα*, which he there uses, signifie a purging Medicine, when it is used alone and nothing is added to it, which may signifie some other sort of Medicine. But by the name of Fomentation, I would have understood whatever is applyed inwardly or outwardly by way of Cataplasin, Irrigation, Clysters, Pessary, or Fumigation; as by the name of Purging I would have understood both Vomiting and Purging. For every cause of Barrenness is either a fault of Composition, or of Temperament, or an Ulcer of the Womb, or a Cacoehymie of the whole Body. Among the faults of the Composition of the Womb there is the smallness and grossness of the Womb, the straitness and hardness of the mouth of the Womb, so that it is not dilated sufficiently, or a perversion of the Mouth of the Womb, or the wideness of it, so that it gapes, and does not retain, or straitness of the Vessels of the Womb, so that for this reason the Menstruous evacuations do not come into it, or the laxity of it, so that they run too much out. In fault of temperament there is too much heat, which consumes the Seed; or cold, which does not concoct it; or dryness, which consumes the Seed and nourishment of the *Fetus*; or moisture which hinders its retention, which also Ulcers of the Womb do hinder. Cacoehymies, when they are poured into the Womb, corrupt the Seed; when they are not poured, they do not hinder Conception yet they make a bad juice for the *Fetus*, and therefore either cause Abortion, or a Diseased *Fetus*. Vitiated Compositions, if they be contracted from the first generation, are usually incurable; but if they are caused by other Diseases, they may be Cured by curing of these Diseases. Cacoehymies require Purging: All intemperatures of the Womb which are joyned with an Humour, or with a Cacoehymie of the whole Body, and especially Ulcers, require Purging, and then Fomentations, Affusions, Injections, and Pessaries: And all these things must for heat be cold, for cold hot, for moisture dry, for dryness moist, and for Ulcers, such as the Cure of Ulcers requires. There-fore

Vallesius. fore it is evident that the whole Cure of barren Women consists in Fomentations and Purges.

II. If a Woman Conceive not through Salacity, which is caused by the acrimony and heat of Seed, she must be fed with gross Diet, such as thickens the Blood, and the Seed. It is good to eat Fruits, as Pears, Apples, and Chestnuts, which breed gross Humors and Vapors, and retard that violence.

Rondeletius. III. Many Women Conceive not, because they have moist and foul Wombs, so that they neither eagerly receive Seed, nor are able to retain it; which disposition indeed is contrary to that wherein they want the Menstrua, that the Womb may be open (for there is a two fold Cause, why newly after the evacuation of the Menstrua Conception is easy in moist Women, both because the Mouth of the Womb, and the Veins and Arteries which end there having been opened remain so, and because when the Womb has been newly evacuated, it draws any Moisture more greedily) This may easily be known, by what comes out, for mucous matter frequently comes from such. Hippocrates lib. 2. Epid. sect. 3. says this is cured by a dry course of Diet. Here by Diet must be understood the whole course of ones Life, where in the whole Method of Cure is comprehended. Because in this affection the Diet which consists in Meat and Drink is not sufficient. The Cure must in this, as in other Diseases, be contrary to the Affection: So that hence it is manifest, that there is not only one way of curing barren Women, as vulgar Physicians have persuaded themselves, but that it is various and manifold according to the cause of Barrenness. For it is proper only to moisten some, and Heat others, and to cool and moisten others.

Vallesius. IV. Moist Women use Stoves, and they that have a hard or cold Womb, Bathes: But they must use them a little before their Menfes come.

Rondeletius. V. Hippocrates, lib. 2. Epid. sect. 6. advises to give a Woman that she may conceive, Polypi to eat, roasted in the Flame, very hot, and almost half burnt, and to beat Egyptian Nitre, and Coriander, and Cummin together, and to make Balls of them and apply them to the pudendum. But this Cure is not proper for all Barren Women, but only for such as are Cold, and have but little Seed: For the Polypus is a most salacious Animal, and goes into a Consumption through too much coition: and such things must needs increase Seed, for they consist of such a juice, and are apt to be turned into the same: And what he here orders to be given is heating and therefore tentiginous. Although I should leave out Cummin, because it wastes Flatulencies, as does Rue.

Vallesius. VI. Among the faults of Composition, it is evident from Hippocrates his Doctrine that the chief and most effectual Cause of Barrenness is the turning aside of the Mouth of the Womb, the Causes and Cure whereof he shews lib. de sterilibus & de Natura muliebr. If the Womb, turn on one side, says he, a Cough takes them, the Pain ascends, and the Womb lies like a Ball, is sore when it is touched, like an Ulcer, And after many such things, he orders, to purge Women, and to wash in warm Water, and to use hot Things, And a little after, If the Womb be turned aside, and the Mouth it self be empty, &c. When a Woman is so, you must give her a Purge, and wash with warm Water, and foment her. The whole therefore of the Cure in this Case consists in the reduction of the Womb to its former place; which indeed cannot be done, except either the Humors be purged (by reason whereof, the Womb is made lax,) or dried up by application, and the Pain be eased, and the part made softer that it may with less Pain be reduced to its place without Inflammation. Therefore you must first purge the Body, and use fomentations and emollient Things, then have the Womb reduced by the Midwife's fingers, and last of all let her rub her Hands this way and that, over all her Belly,

towards the Navil, with Oyl all over the region of the Womb, with a gentle compression, till you find the Womb separated from the Part to which it sticks and reduced to its former Seat. Yet have a care in this Work, that the Menstrua be not near, nor great store of Humors in the Womb, lest something worse grow upon the evil was there before. You must have first a care of this, and then anoint the Belly with Oyl of Rue, white Lillies, Orice, Chamæmill, Bayberies, strowing some of the Powders of the same Things, &c. To accompany with a Man will be good, whereby the Neck of the Womb is better untwisted.

VII. Fumes are good for such Women, as through Cold have little or no Menstrua, especially if it be joyned with an aqueous humidity. Fumes of Spices, saith Hippocrates bring down the Muliebria: But Steams are good for them, the Mouth of whose Wombs is stoped with Cold, so that they cannot receive the Seed. Yet all of them have this quality to abate the Cold of the Womb, that the Seed be not extinguished.

VIII. Hippocrates lib. de Natur. Mulier. § 19. bids us attenuate, and give a Medicine that purges downwards, and apply to the Womb things that purge it downwards, and that cause Flatulencies. But you cannot extenuate the Body, before you have often purged the Body and Womb, by which Purging I suppose all discussing and drying up of the Humor must be understood. Nor is this to be slighted, and that cause Flatulencies; for it must be believed that whatever things do dilate, and any way distend the Womb, and lay the Passages of it more open, which are pressed with Fat and the Cawl, are good Medicines for the Womb: which without doubt I think is done by such things as cause Flatulencies, because they are apt to distend the Part where they are.

IX. In cold and moist Women this Elestuary will be proper, whether the Moisture be in the whole Body or only in the Womb. Take of the conserve of Eryngo and Citron rind, each 1 ounce, conserve of Rosemary and candied Ginger each 1 ounce and an half, ashes of a Bulls pizzle, and ashes of a Hare's Womb, each half an ounce, Pulvis diagalang, diamosch, dulcis, diambri. each 3 drachms, Pine and Hazle Nuts each 3 drachms, a little Sugar, with a sufficient quantity of Syrup of Citron Peel make an Elestuary. Of which take the quantity of an Hazle Nut, a good while after Meat, when she goes, to sleep. This Conserve is most proper for such as are cold and moist all their Body over: for if the Womb only were cold and moist, it were better to dry it by receiving a Fume through a Tunnel: And it may be made of odoriferous Driers, and light obstruents. The Elestuary will be proper for such, if the Dose of the Pine and Hazle Nuts, after they have been steeped in Milk and a little Honey mixt together, be increased, now and then renewing the Milk, that it grow not fowr. Such an one will restore the dried Body and breed store of Seed. In these Elestuaries many other drying Things are used, which if they were taken dry by themselves would rather do harm than good; but because they are mixt with Syrups, and tempered with sweet things, are proper, as shavings of Ivory, Goat's-horn, seed of Hartwort, pith of Ash seeds (they call it Birds tongue) and Sparrows-brains may be added, but they are better taken with Meat than Mixt with the fore-said Things; for they do good because they breed much Seed, which they cannot do, if they be taken in a small quantity. It were better to take the brain of a Pig, or a Hog, well boyled with some wild Marjoram, and after to eat it fried in a Frying-pan: for it nourishes much, and increases Seed. Elestuaries for salacious Women must be made of gentle astruents, and things that breed store of Seed not very hot, as, Take of preserved Myrobalans

balans *Emblici*, and *Chebuli*, each No 2. Citron Peel candied with Sugar (the rest with Honey) 1 drachm, Pine Nuts steeped in Milk, seed of Ash so steeped each half an ounce, with Syrup of sweet-smelling Apples make an Electuary, adding of shavings of Ivory and Goats-horn each 2 drachms. They that are not propense to *Venus* may wear Amber or Musk about them and perfumed Gloves, and they may lay them at Night especially under their Pillows, unless they be subject to Fits of the Mother, for then it were better to tie these sweet things to the Hips.

Rondeletius.

X. If Sweats be frequently provoked in moist Women, because they evacuate the whole Body, it will be very good for them: Upon which account they may sometime drink a Decoction of *Guajacum* sparingly, after the usual manner: Which while a Woman used by my Prescription, she was with Child before she had done taking it.

Plateras.

XI. The use of drying Natural Bathes for a Month's time and above, is the last refuge of Barren Women: To which they go on that account, and sit several hours in them, and Sweat. Which will be more effectual, if they be by Nature also actually hot, as those that are Aluminous and Nitrous, and smell of Lime, called Lead-Bathes, which are common. Sulphureous Bathes, also which, because they have a very emollient Faculty, are the last Remedy in the natural hardness of the Womb, which make sound Women Barren, and because they dry, they will also be good for others; the Salt Water of the Sea also and of Wells, heated by Art and used, will do good either by themselves, or with some convenient decoction.

Idem.

XII. When the Woman has been prepared by Medicines, that she may more easily Conceive, several things should be observed. First, that the time most opportune for Conception is, when the Woman is well cleared of her *Menstrua*, that is, when they cease, for then she more easily receives, retains, and cherishes it. But if the Woman be thin and have little Blood, it is better to lye with her before they come, or in the time of interval. So *Ætius* must be understood, when he writes that a Woman must be laid with, when her *Menses* are at hand. Secondly, it should be considered concerning Coition, that it should be after Meat and before Sleep, for succeeding Sleep relieves the Weariness, and helps retention of the Seed. *Hippocrates* indeed advises to *Venus* after Sleep, Labor, Meat, Sleep, *Venus*, all Moderate: But he has respect to Health not Conception.

Primirosius
de m. m. 4.
c. 1.

XIII. After the Womb is exactly purged, Pessaries should be made, which dilate the inner Mouth of the Womb, and things applied, that straiten the outer. The Womb will be dilated with the following Unguent; Take of the grease of Hen, Goose and Duck each 1 drachm, Oyl of bitter Almonds, Chamæmil each 1 ounce, Orrice root 2 drachms, both the Birth-worts, *Asarum* each 1 drachm, Storax 2 drachms, Pitch 1 ounce, new Wax what is sufficient, make an Unguent. After the use of it, let her use a Pessary of Galls of the Goat or Wolf, with Musk, Castor, and Civet: For all these things lax, draw the Womb downwards, heat, and stimulate *Venus*. Outwardly the Part is straitened with fomentations made of Astringent Roots, Herbs, and Flowers and other odoriferous Things. The use whereof is at going into Bed, after the Monthly purgation, and use of other Remedies, a little before she lies with a Man.

Rondeletius.

Medicines especially made use of by eminent Physicians.

1. In Barrenness let the Man and the Woman for some dayes take upon a fasting Stomach,

the Powder of a Bore's stones, dried in the Shade, with the Broth of an old Cock, truly in a short time they will obtain their desire, as I have more than once tried in several Barren People, whatever the Cause was.

Jul. Cesar
Baricellus.

2. To help Conception, I highly commend both a decoction of Vipers, and of the Womb of a Hare, with Nutmeg, *nux Indica*, shavings of Ivory, Cloves, Cinnamon, Bistort, first making an Infusion of these.

Claudius.

3. They cry up this following for an infallible Medicine; Take of root of Eryngo, leaves of Mother-wort, Avena, what is sufficient, boyl them in red Wine. The Dose is a glass warm Morning and Evening, with 1 drachm of *Tripheba magna* without *Opium*, for 9 dayes.

Corbæus

4. A most certain Remedy to help Conception; Take the stones of a Ram prepared in Wine and dried, the Womb of an Hare prepared, Mace, Cloves, seed of *Anni* each 2 drachms, Saffron 1 drachm and an half, the kernells of Hazle and Pistachio Nuts each 6 drachms. Bruise them and boyl them in 2 Pounds of Malmsey Wine, to the Consumption of a third, two ounces must be given for 3 dayes after the Months, and the fourth let her lye with her Husband, and she will Conceive.

Grulinius.

5. Salt of Satyrion is very good for Women (as its Essence is for Men) to make them Conceive quickly, if half a scruple of it be given frequently in Malmsey Wine or *Agua Vita*, after the Flux of the *Menses*. I have cured many Women with this Secret in a short time, and Men with the Essence of Ants.

J. Hareman
dux.

6. This Pessary is extremely commended by learned Men, namely, Beat Garlick with Oyl of Spike, wrap it up in a long Rag, put it deep into the Womb, when it is taken out, the *Menses* will come plentifully, and the Womb will find much Pleasure, and be cleansed, so that this has made way for Conception, a long time despaired of.

Lud. Mer
catus.

7. *Simon Pauli*, says that Speedwell is good for Barren Women.

Stranguria, or the Strangury.

The Contents.

Whether Blood may be let? I.

How we must purge? II.

It must sometime be Cured with heating Things. III.

When it is caused by drinking new Beer, it is cured by drinking Wine. IV.

The efficacy of an Issue in the Leg, when it comes from the impotency of the retentive Faculty. V.

Medicines.

I. **W**HETHER Blood may be let or no in the Strangury, upon any occasion, where there is no Fever (for if there be one; no question need be made of it) is much controverted. *Hippocrates* teaches 6. aphor. 56. and 7. 48. that dropping and difficulty of Urine may be cured by opening the inner Vein of the Ham. Which shows, that Blood may be let; and we shall forbear, now that the Circulation of the blood is found, to go upon Controversie about which Vein should be opened.

II. If the Strangury arise from sharp Bile or salt Phlegm, we must take great care to diminish the Humor, to translate it another way, to mix and temper it; and first of all before any other Remedy to purge the Body with some gentle Physick. If salt Phlegm abound, whether it fall from the Head, as it often does; or being bred in the Belly, and mixt

mixt with bile, it become such; or if it proceed from putrefaction, we must take care by a Vomit once or twice a week to divert it from the usual passages, and also to diminish it. But if it be bitter Choler, you must Purge twice or thrice with an Infusion of Rhenubarb, in a good quantity of Mallow water. But if the Strangury proceed from impotency of the retentive faculty, which from a cold and moist intemperature, or only a moist, being made weak, cannot hold the Urine the accustomed time; you must purge plentifully at the very first coming of the Disease, and afterwards at times and intervals, contriving not only to waste the humour but to divert it another way.

III. The causes of the Strangury are by *Galen* 3 *apb.* 16. reduced to two Heads, weakness of the retentive faculty and sharpness of Urine, which latter happens frequently. Therefore it is queried, whether also Aromatics be proper in such a case? The Negative seems probable, because fire should not be added to fire. If there be heat and acrimony of peccant Humours, upon which score the Disease is called Heat of Urine, it seems rather to be corrected by emollient and cooling things. But although it be frequently caused by the acrimony of *Serum*; yet it does not follow that the antecedent cause, to which the cure is directed, is always heat, because it may, yea and frequently does so happen, that the grossness of cold Humours serves to gather and retain the Acrimony, so that a sharp Urine breeds the Strangury, not as such, but as its passage out, which its sharpness hastens, is hindered by reason of the gross parts mixt therewith: For as sharp and bilious Humours breed not a dysentery, when they cause a looseness, unless there be a viscidum withal, which makes them stick to the sides of the Guts, and exulcerate the same, so also the *Serum* of its own nature possessing a peculiar Acrimony, breeds not the Strangury, unless some peccant Humours be joyned with it. For this reason new Beer causes the Strangury by its thickness and viscidum, obstructing the Urinary passages, and consequently sharpening the *Serum* by the Acrimony of the *faces* not depurated; in which case to give generous Wine does good, because it heats, attenuates, concocts crudities, and so corrects the antecedent cause: For this reason the use of Aromatics is often not inconvenient, when, to wit, it depends on such an antecedent cold and obstructing cause, notwithstanding that the proximate peccant matter is sharp and perhaps hot: for it often happens, that in a hot Disease, a hot Remedy is prescribed, not in respect of the Disease, but of the antecedent causes.

IV. Rhenish Wine alwayes did me good in the Strangury caused by drinking new Beer. If I could not get Wine and was forced to drink new Beer, I was eased of my trouble by taking Nutmeg. When some had fallen into that mischief, they cured themselves only by anointing their Navil with the fat of a Candle. Others cured themselves by taking only a spoonful of *Oxymel*. But I have experienced that the smell of the leaves of black Currant Trees, and much more a Decoction of them mends this fault.

V. If you find, that no Remedies will do in this sort of Strangury, you must make an Issue in one Leg, by which the Phlegm imbibed by those parts may run out, which uses to be a present Remedy.

2. Salt of Antimony is a secret in the dysury and Strangury.

3. Spirit of Turpentine quickly takes away all difficulty of Urine. The Dose is from 9 or 10 drops to 12 in Cinnamon water.

4. I have often seen them that were Sick of the Strangury relieved of a violent pain by taking a drachm of the powder of Crabs Eyes in White Wine.

5. A little fat of a Goat put into the Navil easily cures the Strangury. ¶ Oyl of Mastich drop warm into the Navil takes it away quickly. ¶ Amber, especially the white, powdered and given in Wine, or boyled in Beer is good for the Stone and Strangury; for it presently opens the passages and expels the calculous matter. ¶ Several have been cured in the manner following; Take Rose-water beat up with the white of an Egg and give it to drink.

6. I have learned this, that Spirit of Spanish Salt, drawn in the extreme Heat of a reverberatory, with Potters clay, taken in white Wine, that was drawn out of the Vessel a day before, does not only take away the mortal Stranguries of old Men, and because it is wholly diuretick hath cured several; but moreover they that have had an extraordinary Stone fall out of the Kidney, and stayed some Months in the Bladder, have at length voided it in small pieces by Urine. And it is made of Salt, first melted, and then freed by the Fire from its superfluity, then the Salt is beaten, and dissolved among slices of Radish, and then dried again, and then distilled with as much Potters Earth in a violent Fire of reverberatory, having a care that nothing expire.

7. To anoint the Belly with Beef tallow, takes away the Strangury caused by drinking Beer.

8. A glass of the clarified juice of Pellitory of the Wall is admirable, if it be from a Stone or thick matter.

9. *Rulandus* his certain experiment for the Strangury; Take Sheeps Wool carded and made into the form of a Plaster, to which add some Goats dung mixt with a Boy's Urine, apply it below the Navil, it never fails.

10. Outwardly to temper the Acrimony of the Humours, and heat of the Bowels, a Bath of sweet water is very good, in the Morning before Dinner, especially with leaves of Violet, water Lilly, Lettuce, Mallows, Nightshade, &c.

11. This is excellent good against difficulty in making water; Take 2 ounces of Privet water Morning and Evening.

12. One found great benefit by 6 drops of rectified oyl of Amber in 3 spoonfuls of Parsly water, or Cock broth.

13. I successfully cured the Strangury through the resolution of the Muscle in the Neck of the Bladder, by putting a Woman in hot Oyl, in which the leaves of Laurel, Betony, Sage, Rosemary, wild Marjoram, Penny-royal, Flowers of Chamomil, and Cassidony were boyled, after she had sate in it, I made her an admirable Oyntment of Oyl of Worms, Lily, and Fox, in which fat Whelps were boyled, till the Flesh came from the Bone, when I had strained it, I put in *Styrax Calamita*, *Benjoin*, *Opoponax*, *Olibanum*, Mace, Nutmeg, rectified aqua vite, Goose grease and Wax, which when she had used some Months, she was cured.

14. Powder of dried Acorns given in Wine is a present Remedy for the Strangury.

Medicines especially made use of by eminent Physicians.

1. One drachm of the flesh of a Hedge-hog dried in the Sun and given in Wine, brings away much Urine without trouble.

D d d d 2

Strumæ,

Strumæ, Scrofulæ, or the Kings-Evil, or Scroffles.

The Contents.

How it may be distinguished from hardened Glands. I.

What sort of Purging is proper? II.

Whether a Vomit be proper? III.

The efficacy of Vesicatories applied to the Head. IV.

Whether Repellents are proper? V.

In what Sudorifics should be used? VI.

Narcoticks and Frictions waste it. VII.

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What gives way to Suppurators? IX.

Dispersed in the Neck by Medicines. X.

The Cure by cutting out. XI.

Upon what the difficulty of the Cure depends? XII.

When it is Cured, it nevertheless returns. XIII.

Inward Medicines that consume them. XIV.

Medicines.

I. BECAUSE there is a great likeness between the Kings-Evil and hardened Glands (for they are alike both in place and matter,) therefore we must do our endeavour to distinguish the one from the other. They differ first, because the matter of the Glands is more subtil and thin, of the Kings-Evil more gross and viscid, and more contumacious, and hence it is, that whenever a thin and subtil matter is incrassated, of Glands they become the Kings-Evil. Which is Galen's meaning 1. *de loc. aff.* 3. when he says, that Glands sometimes turn into the Kings-Evil. Secondly, because indurated Glands are more separable from the adjoining Flesh, so that by the touch you may easily know it from the Glands: But the Kings-Evil is so propagated into the adjoining Flesh, that it is a very hard thing to distinguish it. 3. Because the Kings-Evil has a Coat, but the Glands are alwayes without one. Rogerius the Surgeon advises to take Ivy Leaves, and Citron, and pound them together, and lay them to the Swelling: and if the Swelling fall in 3 days time, he says it is a sign they are Glands, and not the Kings-Evil; but if they grow worse with the application, so as to be red and ake, it is a sign they are not Glands, but the Kings-Evil.

II. We must observe concerning Purging of Children, since Infancy is very infirm, it must be treated with very gentle Medicines, and it is my advice rather to Purge often gently, than to give strong Medicines. For so I Cured a Noble Boy of the Kings-Evil. Therefore they that commend *Pilule fatidæ*, *de Euphorbio*, and such Medicines for Children are not to be heeded. I confess, they are tolerable in grown People. ¶ Physicians for the most part accomodate their usual Purges in the Kings-Evil to Phlegmatick desfluxions, whence they reckon it arises, not only if it be in the Neck, but in any other part of the Body, and direct them chiefly to purge Phlegm. But as such a Body is either Plethorick or Caco-chymick, or otherwise full of ill Humours, I accomodate my Medicines to evacuate them, especially if they be the cause of it; and when there is a great mass, or pravity of Humours, and the Kings-Evil is bad and breaks out in many places, then I give stronger Purges. ¶ As to evacuation, unless there be other occasion for it, it ought not, as commonly it is, to be so much insisted on for one Swelling, as if the Body were full of the Scroffles, especially since otherwise there is small hope of Cure.

III. I find divers opinions concerning Vomiting. *Ætius*, whom *Avicenna* follows, commends Vomiting; but others wholly condemn it. I find some who go

a middle way, and say, it is not good before Purging, but after. But I am of opinion, that none should Vomit in the Kings-Evil; and I am of this opinion for this reason. Because though the antecedent matter may in some measure be diminished by Vomiting, yet the impacted matter is so far from being thereby removed, that it is rather the more exasperated. Besides, it is certain, that the Head is extremely filled with Vomiting. For look but on those that Vomit, and you may see the jugular Veins strut, and the whole Head swell and grow hot; so that without all question the Head is filled with Vomiting. Which made *Hippocrates lib. de loc. in hom.* greatly to condemn vomiting in Diseases of the Ears and Eyes, and for the same reason, why it is not proper for Diseases of the Ears, it may not be proper for Diseases near the Ears.

IV. To stop the matter, which is in Flux, Frictions, Cuppings, Vesicatories applied to the Head are proper; and as soon as I observe Swellings arise in the Necks of Children, I find no more present Remedy, than to exulcerate the Skin of the Head: for this is the most proper diversion and evacuation; But we must have a care not to draw Blisters in Childrens Heads with *Cambarides*, for as I have often observed, in this age they often cause great torture, and pissing of Blood: But it is better to do it with Mustard, Nettles, Hony-suckle; yet with great moderation and prudence.

V. But whether in stopping the matter, which is in flux, may we use astringent and repelling Medicines? *Galen ad Glauconem*, speaking to him, tells him, that he gave astringent Medicines for the Kings-Evil; and, as *Alexius* interprets it, repellent. From which place any one may gather that the use of them is proper; but never except in the beginning. Besides in *Rhases lib. de Apostem.* it is found that Plantain is very good in the Cure of the Kings-Evil. But now Plantain is a Medicine that binds and repels: Wherefore the use of such Medicines seems convenient in curing the Kings-Evil. But there are reasons on the contrary side, because whether we have regard to the matter, or the places suffering, we are very far from any reason for ever using them: for the matter is cold, thick and impact, and therefore can by no means be repelled: and in respect of the place they are not convenient, because if we find the matter subtil, and hot, since it is the place of the Glands, and next to the Brain it self, the matter must never be repelled from these places, lest it be forced from a more ignoble part into the Brain. Therefore *Galen 3. 3. K. T.* says we must never use repelling Medicines in the *Parotides*. And he in 14. *m. m.* says in express terms, that no other cure should be used in the Kings-Evil, than such as is good for a *Scirrhus* and hardened Tumours, in which he advises to act only by emollients and dissolvers, and all Physicians have followed this way: yea *Ætius* says that the Kings-Evil beginning in Children must be softened, dissolved and discussed, so that no scope is left for them, who think that the use of Astringent Medicines may be convenient in the beginning of the Kings-Evil. But they that understand *Galen* speaking in his own Language, may easily remove this Scruple, because all Interpreters have been mistaken in this place: For the word which he uses, *τὰς μετὰ τὴν ἀφροδίτην*, they have very ill translated to astringe, for it rather signifies to restrain, or diminish, or make smooth; so that *Galen's* opinion in that place is, that he gave Medicines, which restrain and keep down the Scroffles, and this may easily be gathered to be true, because in the same Book cap. 4. he uses the very same word, and the Interpreter has translated it very right in that place: It must not therefore be thought that clear-sighted *Galen* could be mistaken in so plain a case, as to use astringents in the Kings-Evil. But what shall we say

say to *Rhases*? I say that Plantain may be used either green or dry. In the green the absterfive faculty is almost wholly drowned in the moisture, but in the dry it is great. Which when *Galen* 6. *Simplic. med. cap. de Arnoglossa* would teach us, he says that the Leaves and Roots of Plantain dried, are good to open obstructions in the Liver and Kidneys; Therefore when *Rhases* commends Plantain, he means the dry, because it cleanses, dissolves, and discusses. ¶ Yet *Rondeletius* *pract. l. 2. c. 4.* affirms that he has cured several of the Kings-Evil beginning, by laying Cypress nuts upon the part, according to *Dioscorides* his precept. ¶ *Wharton* also *Adenogr. c. 40.* says, that the external cure of the Kings-Evil, which is managed by repellents and discutients, is not without hazard, because the matter may very easily recur to the inner parts, and breed there more dangerous Swellings of the same sort, or may encrease these that were bred there before.

VI. Sometimes Sweating is proper, if abundance of Scroffles dispersed up and down the Body do show there are excrementitious ill Humours, especially in Phlegmatick and moist Bodies. But in hot and Cholerick Bodies sweating is not so proper, for it only more inflames the Body and Humours: In which case Surgeons rashly think to cure by this one Remedy, as they think they can all external Diseases, and so they often emaciate Mens Bodies to no purpose.

VII. As we find that Narcoticks outwardly applied have a great dissolving faculty, so also, if applied in the Kings-Evil, they will do much: As leaves of Mandrake, Henbane, Poppy, bruised, or roasted a little under Coals or boiled or used any other way by themselves. Also Mandrake root, or powder added thereto &c. The rubbing also of the Scroffles till they grow red, does also conduce something to the dissolution of them; And if it be used before the application of Topicks, it better disposes them to receive their virtue.

VIII. By a potential Cautey, which making an eschar in the Skin without pain opens the Scroffles, I have often got them out: Or I have laid them bare, that they might be better suppured by applying Medicines; But it is dangerous to attempt this by actual Cauteries, seeing an Inflammation might easily follow. Yet in any ignoble place they might very well be opened in this manner.

IX. The cure of the Kings-Evil consists in this, that the matter already gathered, be perfectly taken away, and that what is in gathering be prevented from gathering. Concerning what is gathered, we must consider, whether it be only pituitous, or also hot; if hot matter be mixt with it, all hold that suppuration must be attempted; but if it be pituitous, we must again consider whether it be very thick or but moderate: If it be very thick and viscid, the cure can be expected no other way, but by putrefaction, the instrument and fire: But if it be moderately thick, the cure consists in this, that the matter be dissolved and dissipated.

X. A certain Woman had the Scroffles all over her Neck, and she was cured in a Months time. A powder of equal parts of Sugar, Ginger and Turpeth was given her, which purges Phlegm particularly from the remote parts. After *ceratum oxaleum* was applied, they were softened with oyl of Lizards; Take green Lizards as many as you will, boyl them in common oyl, till they be burnt, and the oyl turn black: let the colature be put in a Glass and set in the Sun till the dreggs subside, the oyl grow clear and it be of a brown colour. Then I gave every Morning for 30 dayes of the Eleuary, which *H. Saxonia* and *J. Præpositus* reckon as a most sure secret; Take some common or green Lizards, cut off their Heads and tails and take out the Guts, infuse them in strong white

Wine Vinegar 40 dayes by themselves: Then dry them and steep them in other Vinegar; and dry them again either in the shade or Sun; and reduce them to powder: which being done, with one ounce of the powder mix 4 ounces of Honey. The Dose for Children is 2 drachms, for grown Persons half an ounce, six drachms, or an ounce at most for 30 or 40 dayes. I have tried the admirable virtue, of that Unguent which *Aguapendent* has. *Pentat. l. 1. c. 21.* for the open Scroffles, in a certain Nun, who had ulcerated Scroffles in her Breast, and in a Maid, who had them in her Neck. ¶ A Maid about 18 years old had strumous Swellings in her Neck, which by using Remedies a long time had been suppured, and afterwards healed up; but there remained some share of it very hard, which could not be dissolved by *Emplastrum de Vigo*, *Mercurio quadruplicato*. Then I prescribed of the foresaid Plaster, Roman Vitriol, and Gum Ammoniac dissolved in Vinegar, and thickned with a sufficient quantity of Turpentine, whereby they were dissolved in a month; using in the mean time convenient diet and evacuation.

XI. We forbear not to cut out Scroffles, though they be crude and hard Tumours, but then they must be moveable, and not fastened to the Flesh, and we may draw them out with our Fingers, as we do *stomatata* and such things, having cut them from the Skin, and severed them round, with a knife broad and sharp pointed and crooked backwards, according to *Galen* 14. *m. m. cap. 11.* I have tried this Chirurgical way of Cure with success in hundreds. ¶ A Girl about ten years old had a struma on the right side of her Throat, which sticking close to the *aspera arteria* and the recurrent Nerve, did a little hinder her Breathing and her Voice. Her Mother entreated me to cut it out, because she thought it might be done without danger, seeing it was not so big as a Gooses Egg. But I refused to meddle with it, for fear of an Hemorrhagy, or spoiling or loosing her Voice; for the jugular Veins, and the recurrent Nerve of that side, seemed to be involved in this struma. Not long after a rash fellow adventured on the operation. But as soon as ever he made use of his razor, the Maid died immediately.

XII. Although *Laurentius* reckon the Scroffles curable; yet I must say, they are very difficult to cure, or incurable: for if you apply slight things, the hardness of the Humour resists them, if strong, burning, causticks, yea fire it self, to melt and waste the glutinous Humour, that will draw the Blood to the heated part, by virtue whereof those clammy Humours will be concocted, and when concocted, will remain the harder, as I have found by my own experience, and what mortal Man can be found so vain glorious, as to boast (as some have done) that they can cure them by Topicks, when they have their original not behind the Ears, but from the inner Bowels?

XIII. This is observable, that although they be most exactly cured, they do return again and again. I think there are two Causes of this Event, the first is the thickness, viscosity and contumacy of the matter whereof they are made; for although we use our utmost care and diligence to root them out, and to extirpate the matter of the Scroffles, yet their Contumacy is such, that for the most part some share of the matter is left behind, which is as a certain fond, which not only destroys the temper of the Part, but also infects and corrupts the nutriment as it comes to the Parts, so that it affords plenteous nourishment to this Disease. The second is the Bladder, which is so firmly fastned, that it can scarce be got out, wherefore when it is left it is filled again with some ill Matter or Humor, and gives occasion for the breeding of it anew, yea although by the Artists care the Bladder be got all out, yet there always remain the

Sculterus
Op. 12Riverius,
Cent. 2. Obs.
54.

Severinus,

Fabricius
Hildanus,

Fontanus.

the roots as ligaments from which it sprouts anew, and consequently the Disease: For if, as Hippocrates sayes, when the Blood is congeled, it is covered with a certain Coat, which if it be taken away, a new one comes in its stead, and if this be taken away, so a third; how much more may the Bladder grow again, if any Root or Branch of it remain?

Mercurialis.

XIV. The Scroffles rarely appear in any great number outwardly, unless they be rooted inwardly in the Mesentery, as Riolanus Ench. c. 18. l. 2. sayes, And Wharton Adenogr. c. 40. observes, that they who are troubled with the Scroffles outwardly have them also very much inwardly. Also Julius Pollux the Grammarian l. 2. c. 98. has told us that Scroffles grow in the Mesentery. For which reason Langius l. 3. Ep. 4. asserts that those mineral Waters, are the wholesomest, which taste of Lees of Wine, which, as Arnaldus sayes, not only dissolves these inward pituitous and stumous abscesses, but the outward also. Barbette in his Praxis commends Acids and volatile Salts taken inwardly; which Deckers in his Notes advises to be gentle and temperate; which accurate Practitioners have observed otherwise to do more hurt than good, for example, Spirit of Salt, Nitre, &c. rectified with Spirit of Wine and sweetned by Cohobation: He commends above all others, Spirit of Sal Ammoniac, inwardly and outwardly mixt with a due vehicle.

Medicines especially made use of by eminent Physicians.

1. Drink every day out of a Mans Skull, and the Kings-Evil will then vanish. ¶ The Mustrome that grows on a Birch-tree, put in Wine and drunk, has a singular Virtue in gradually curing and wasting the Kings-Evil.

Agricola.

2. It has been observed that Scroffles and other Tumors fall, if the Part affected be rubbed with a dead Man's Hand, for so the Swellings gradually vanish, as the dead Body rots by degrees.

Th. Bartholinus.

3. Root of Vervain hung about the Neck of one that has the Kings-Evil, gives wonderful and unexpected relief. ¶ They say Silver-Knapweed is marvellous good; also red Poppy steeped in Wine, and bruised, and the Mucilage applied to the Swelling, is a Medicine that does good by tempering, and has those Virtues which we require in Medicines for the Kings-Evil, over drying things being excluded.

Baricellus.

4. Three Toads boyled in Oyl Olive in a glazed Earthen Vessel, make an excellent Oyl, for the Kings Evil; but the Fumes of them, while the Oyl is in making are dangerous: Therefore keep that Vessel close, and have a care. First they apply Arsenick to the Scroffles, and blister them, then corrode the Part with sublimate, and use the said Oyl, which will be yet better, if you infuse the salt of Toads in it.

Borellus.

5. This Potion has been oftentried, which not only takes away the Kings-Evil, but all Mucosities of the Throat; Take of Broom-flower Water 3 ounces, drink it warm with Sugar in the Morning. The Powder of Broom-flowers does the same mixt with Honey of Roses.

Sebast. Corralio.

6. The lesser Celandine has 4 or 5 grains like Wheat growing to its root, which are used to draw out the Scroffles with great success.

Crollius.

7. Their Cure depends upon the Meazles of Hogs, which may be calcined and sprinkled on them, and Oyntments may be made of them, which are very good for the Cure of these Swellings and these Unguents may be fortified with distilled Oyl of Hogs-Lard, or distilled Oyl of Hogs-Meazles,

which is a specifick against the Kings-Evil.

Joh. Pet. Faber.

8. If the Kings-Evil must be taken away by causticks, there is no better Medicine to take them away, than sublimated Arsenick; but you must have a care, that the Parts near the Swellings do not Putrefie or Inflame.

Gull. Fabricius.

9. An excellent Electuary to take away the Kings-Evil, is thus made: Take of the Bones of a Hen, the flesh whereof has been boyled off, dry them, and powder them. Take of this Powder and Seed of *Sesamum* each alike, as much as you will, with Honey make an Electuary. Take a drachm at a time Morning and Evening all the decrease of the Moon till the new, and then repeat it the following decrease of the Moon.

Rod. à Fonsec.

10. The use of the Powder of Sponge will cause it to decrease, if you drink as much as you can take upon a Knife's point, in Cinnamon-water. The Sponge must not be burnt, for then its seminal Virtue is destroyed.

Grembr.

11. This is admirable for the Kings-Evil, Throat-rupture, *Parotides*, and all hardness. Take the leaves of Cypress, neither the tenderest nor the hardest, reduce them to powder, Sprinkle them with strong Wine, and turn them, till the Body of them turn to dreggs. Lay it upon the Scroffles or Rupture and the third day take the Medicine, you will find the place contracted, which must be squeezed out with the Fingers. Let this Medicine be repeated, and on the Seventh or Ninth day at farthest, the Kings-Evil will be gone to a Miracle.

Hollerius.

12. Take of root of Fern, Spleenwort, Dwarf-elder each 3 ounces, cut them and boyl them in the best Wine, then pour away the Wine, bruise the Roots, and add of live Sulphur 1 ounce, ashes of Cockle-shells, 2 drachms. With equal parts of Honey and Vinegar reduce them into the Form of a Cataplasim, lay it upon the Scroffles, it consumes them wonderfully.

Fr. Joel.

13. There is scarce any Plant of so great Power in softning and dissolving Swellings in the Kings-Evil, &c. as the bulb of Cornflag and Hogs-Lard outwardly applied.

Laurentbergius.

14. It has been found by experience, that burnt Allum powdered, if half a drachm of it have been given in Wine alone, or mixt with other discutient and drying Powders, has done much good in this Case.

Platerus.

15. Root of Figwort eaten for 10 dayes every Morning fasting cures the Kings-Evil.

Arnold. Villanoanus.

Stupor, or Numbness.

The Contents.

Sweat must be promoted, if it be from a Melancholick Humor. I.

Some is cured by Bleeding. II.

It is to be cured especially by Bathing. III.

The Numbness of the Thighs ending in the voiding of Stones. IV.

I. **W**HEN the whole Body is evacuated, the matter comprehended in the Nerves must be digested, to which end Sweating is reckoned altogether necessary: for the portion of the Melancholick Humor, which is the cause of Numbness, is serous and acid rather than thick, and may therefore be got away by Sweat. But you must be very careful in composing the decoction, so that it may be drying in the passive, and temperate in the active Qualities. Wherefore *Sassa* may be the basis of the decoction, to which may be added *China*, Mastic-tree, wood of Rosemary and Tamarisk,

risk, making the infusion in Chicory and Betony-water, and when it is almost boyled add an handful of Ground-pine.

II. Hippocrates cured *Stimargus* his Maid of Trembling by plentiful Bleeding: So I have several times cured Plethorick Bodies of Trembling and Numbness by repeated Bleeding.

III. Pumping requires, the Head should be exactly Purged; a Sheeps-skin can but make lax and resolve a little. The putting a Limb into an Ox new killed, is good rather for shrunk Sinews, than for such as are lax and full of Moisture. But here is occasion for some Medicine, that is of subtil Parts, very penetrating and dissolving, but not hardning, because the Nervous kind is hard and dense. Such a s is Sulphur, wherefore sulphureous Bathes are a Remedy of great use, used for several dayes. And because they penetrate and dissolve the Humors, but do not strengthen the Parts, therefore afterwards a strengthening Bathe must be used.

IV. I lately had a Nobleman under Cure, who brought the Advice of the Physicians, that had by common consent prescribed him Medicines for the Palsy. When I predicted, to him that within four dayes he would be eased by voiding fragments of a Stone, he laughed at me and my Prediction, because no Body else had told him of any such thing, nor had he ever voided any Gravel; Yet at length with much ado he was perswaded, and found that I foretold truth. And the Cause is this, the Branch of the *vena cava* descending, one goes to the Kidney, another to the Thigh, and a third to the Stones: Therefore upon the plenitude or compression of that which feeds the Thigh, a Numbness follows; as when the other, which comes to the Stones, swells, and is therefore made shorter, a Stone is contracted.

Sudor nimius, or too much Sweating.

The Contents.

Unseasonable Sweating stop'd by cooling inwardly. I.

A Nocturnal one cured by Purgings. II.

The way of stopping it in Fevers. III.

The stopping of a salt, bitter and acid One. IV.

When the outward use of Allum may be allowed. V.

The way of stopping too great a Sweat. VI.

A Pertinacious one cured in an old Man. VII.

I. **T**HE Wife of N. after she had been cured of a Fever, sweat every Night. I prescribed her a cooling Julep of Chicory and Bugloss Waters with Syrup of Apples, and she Sweat no more after that. Whence I gather that Sweating in ones Sleep is not alwayes a sign of luxuriant Humors, but sometimes of Heat; for healthy People, that are of an hot Constitution, often sweat in the Night: Besides, the foresaid Woman was cured without any evacuation, Natural or Artificial.

II. A Man 40 years old of a melancholick Complexion, had been troubled with Night Sweats a long time, which lasted 4 or 5 dayes, and then gave over, returning twice or thrice in a Month. They proceeded from a quantity of Serum gathered at intervalls, and discharged to the Skin. He took twice a Month Powder of Jalap and Creme of Tartar, each half a drachm, which being continued for 3 Months, he was rid of his tedious Ail.

III. Sweat, either excessive or hurtful in it self, which weakens a Man still more and more, will abate, and at length cease. 1. By keeping the Body moderately covered, yet not Naked. 2. By ha-

ving a care of any volatil Salt, and Spirituous Acid, such as Vinegar. 3. By using such things as fix the Acid, as Chalk, Corall, &c. On this Ground I often in the Year 1670 gave to several that were Sick of an Epidemick Feaver, and fell into sweating Night and Day, which every day decayed their strength, the following Electuary, upon taking of which twice or thrice a day, to the quantity of a Nutmeg, they were cured by degrees of their Sweat, and their quartane Ague, or of any other, if it remained, and they got strength. Take of Conserve of red Roses 2 ounces, *confectio hyacinthi* 1 drachm, *Dia-cordium* 2 drachms, red Corall prepared 2 scruples, Syrup of Myrtles what is sufficient. Mix them, Make an Electuary.

IV. A salt Muriatick Sweat will be amended with Medicines that correct a Muriatick Saltiness, and sometimes by Purgatives; A bitter Sweat indicates that Bile must be diminished by Cholagogues: The matter of an Acid Sweat will be concentrated with Corall, Chalk, Crabs-eyes and the like, and then diminished by Hydragogues.

V. In a Diaphoretick Sweat, the external use of Allum with great circumspection ought not to be rejected, if a Shirt dipt in a solution of Allum, and dried again, be put on, but I commend it only in the declension of the Disease.

VI. It is evident, that there is often too great a Sweating, for nothing is more common than for some that are Sick of a Consumption or Scurvy, and others, who difficultly recover of Feavers, yea, for some without any Disease, or evident Occasion, to run with Sweat. The Consumptive and Scorbutick are obnoxious; because when the Blood is infected with some impure Corruption, or is disordered, and therefore cannot rightly concoct and assimilate the alible Juice, that is continually poured into its Mass, it severs and casts out by sweat this Juice so degenerate, and now and then with other Recrements heaped up to Plenitude. The Cure depends altogether on the cure of the Disease, whereof it is a Symptome. In the mean time in this Cure, as to what concerns a course of Diet, an useful and necessary Indication is taken from this Symptome, namely, that when Nightly and plenteous Sweats attend these Diseases, a Diet may be kept of aliments that are very small, as Milk, Oat-Meal grewel, Barly-creme, and the like, whose smooth and soft Particles the Blood may be able to bear, and not of Flesh and strong Meats.

2. Too much Sweating is the effect sometimes of another Disease, that went before and is extinct. I knew a young Man, who, when a quartan Ague left him, fell into such profuse and long Sweats, that he was in a Consumption, this Man, after he had tried several Remedies in vain, recovered by using Asses and Cows Milk. In such Cases as these, the Blood perpetually rejecting, and as it were vomiting out its contents by the Mouths of the Arteries, does not only cast out the Chyle, immediately as it is poured out of the Bowels; but moreover taking both the Nervous juice and the sustenance of the solid Parts, to feed its self, it by and by loathing them all, expells them together with the nutritious Juice by the Pores of the Skin. The cheif Cause of this affection seems to consist in the dyscrasie and debility of the Blood, in as much namely, as its liquor, like Milk growing sour, is apt to melt, and be precipitated into serosities, wherefore both its own separations, and the Humors also, which are added elsewhere, when they cannot be assimilated, are immediately separated: And when the Pores of the Skin are very wide, they are cast out rather by Sweat than by any other way of excretion. Such excessive Sweating uses to arise not only from the depraved Temper and Fermentation of the Blood, but sometimes from its depraved Flame: Both when the Blood fermenting Feverishly through excess of Sulphur, does

Sylvius de
Boe. Prae. l.
1. c. 25.

Idem

Hofmannus

P. Pachecus
in Obs. River.
27.

now

now and then break out into Sweat: And when through the defect of it, the Blood being depauperated, and made Waterish, is not so much kindled, therefore as often as it is hurried into a rapid Motion, by some ascitic heat, or the motion of the Body, its ferocities are dissolved into Sweat. Sulphur is wanting in the Blood, either because it is wasted, as after long Fevers; or because enough is not bred for want of Food; this latter may be observed in scarcity of Provision, or after keeping of Lent, for immediately upon Running or Walking fast the sweat bursts out. Yea Cattle when they are fed with new Hay, upon the least Labor sweat much, and are soon tired. The Indications of Cure are especially these three. 1. To remove or correct the dyscrasies or debilities of the Humors. 2. To contract a little the Pores that are too open. 3. To derive the Serum and Watrish recrements of the Blood to the Kidneys. The first of these is performed by such things as destroy the prepotency of an acid Salt in the Blood: also such as promote the exaltation of the Sulphur (if perhaps it should be deficient) To which ends Antiscorbuticks, Chalybeates, and Medicines endued with a Volatil Nitrous, and Alkalizate Salt, often do good. The second intention, consisting in a due constitution of the Pores is commonly performed only by outward administration.

Willis.

VI. An old Man 72 years of Age was in the year 1657 very ill of a Diaphoretick Sweat, so that he was all over in it almost Night and Day, and what ever he eat or drank, he immediately perceived it pass out at the Pores of the Skin. The Cause of this Disease was abundance of serous Humors, complicated with the Scurvy, which were gathered in the Mass of Blood, by a depraved and vitious fermentation in the Organs designed for Sanguification, which did not transmute the acid Salts of the Meat into volatil Salts. The Disease had lasted 3 Months, before my Advice was taken, but it was quickly cured by me, only with Ivory, without Fire, and an Emulsion made of the four greater cold Seeds and Cichory and Bugloss-water: giving now and then Jalap and Crytall of Tartar: Forbearing Wine, Sower Meats, and other things that breed Scorbutick Blood. He lived until he was fourscore and three years old.

Hofmannus.

Suffocatio, or Suffocation or Strangling.

The Contents.

- Bleeding is often convenient. I.
 Fear of Suffocation from the Lungs distended with Wind. II.
 How they that are Strangled with an Halter may be recovered. III.
 By what means they that have been Suffocated in the Water, have been brought to Life again. IV.
 The Cure of those that are Choaked with Smoak. V.
 With the Steam of Must. VI.
 With the Veins too full of Blood. VII.
 With Worms coming into ones Throat. VIII.
 With the swelling of the Thymus. IX.
 With poisonous Muskhornes. X.
 Men may be taken with Fits, like Hysterick ones. XI.
 An easy Remedy in fear of Strangling. XII.

1. For them that are Strangled or Choaked, the suffocating Humor having recourse to the Throat, either because the Blood is forcibly carried to the Heart or Brain, whether it come from the Womb or from some other Place, Bleeding is never amiss in this Symtome, that is, if you find the Pulse strong and the Veins full. Bleeding is also good

when it comes from drinking cold Water, as *Discorides* advises, for Bleeding is not convenient because the Water is alwayes hot, or because Infectious, but because there is much in the Veins.

Bocallus.

II. Sometimes Wind distends the Lungs so violently, that it causes Suffocation, unless help be given by opening the Breast by *Paracentesis*, which is often done at *Paris*, to the great advantage of the Patient and the ease of the Breast, though no Water run out, but Wind break out violently. *Hippocrates*, calls them *πνευματίας*, whose Breast is distended with Wind.

Riolanus.

III. *Anne Green* a lusty young Woman about 22 years of Age, was tried for killing her Child, and hung on the Gallows for half an hour. Her kindred who stood by, that she might be dispatched of her punishment by a speedy Death, some of them beat the poor Wretch on the Breast, others hung on her Feet, and others lift up her Body, that as it fell down again, it might draw the Halter closer; She was reckoned by all People to be Dead, and was taken from the Gallows. The Physicians waited for the Body, to dissect it, but *Dr. Petty*, and *Dr. Willis*, who were to dissect it, observing her to breathe, altered their Minds, and consulted how they might save her Life. They directed all there Care, to procure the free and accustomed Motion of the Blood: Therefore forcing open her Mouth, they poured in Spirits and Waters, which in a small quantity do very efficaciously strengthen the Heart: They diminished the quantity of Blood, which would otherwise have been burthenfome to the oppressed Heart, and took at several times repeated, in all to the quantity of 20 ounces, that the Heart might, when eased of the abundance of Blood, more easily and readily distribute the rest into the whole Body, and might the more eagerly draw to it self, that which stagnated in the Veins, or moved too dull: They laid Cataplasms round her Neck, and anointed her all over with Oyls and hot Spirits, that the Bruises might be dissolved, and that the Blood might pass more freely to the Head by the *Carotides*, and repass by the Jugulars. They ordered Clysters full of Spices to be given her; both that they might get out the Excrements, which perhaps might be troublesome to the Guts, and might prove more prejudicial to other Parts; and that they might quicken the Motion of the dull Blood in the mesenterick Vessels. Upon this, she first scratched her Hands, by and by she could open her Eyes, and move several Parts, and was able to Cough. Afterwards being further helped by the dexterity of the Physicians, she could understand the by standers talk, observe, and laugh. She found a Pain and numbness in the bruised Parts: and in a few dayes time she was well, and was able to go about her Affairs.

Wepferus.

IV. A Girl not three years old fell into a Vessel full of Soap-water, and being full of it she seemed to Breathe her last, she slept profoundly, rattled, and scarce drawing any Breath was quite Choaked, such a murmuring Noise coming upon her, as is usual in People that are dying. I was called, and I ordered that a Decoction of Barly unhusked, Liquorish and Figs should continually be poured in a little warm; and when she had Vomited gently, and had cast up all the Soap-water, and freed her in a few hours from Suffocation; her Mother, if I had not hindered her, had given her Rhenish Wine, which indeed is amicable to Nature, but it might not only have easily carried the poisonous Matter in the Soap to the Heart, but it might easily have raised an inflammation and a Fever.

In the year 1577. when a great many Boyes and Girles had got upon an old rotten Bridge to see a Soldier that was fallen into the Water; The Bridge broke and a great number fell into the Water, and were

were in danger of their Lives; to whom when I was called, they all escaped by taking a Decoction of Chamæmil Flowers in Beer, by which we made them sweat in Bed: which I did to several others, and they all recovered.

Forestus.

My Son *Frederick Bonet*, 20 Months old, she that tended him having left him, was walking over a Pit full of new quenched Lime, and being thrust by one about his own Age, he fell into it. She who had the care of him coming immediately, jumped into the Pit, threw him upon the edge of it, and she herself could scarce get out by reason of the deepness of the Pit, and softness of the Lime. She immediately poured some Wine that happened to be in the way, into his Mouth, when he breathed not at all, but seemed as one dead, by means whereof he vomited the Water, and some signs of life appeared. By and by, left the Acrimony of the Lime, wherewith his whole Body was smeared, should hurt him, she cut the Girdle wherewith his Clothes were tied, and put him naked into a Pale of Water, and washed him all over. A little after his Face grew fiery red and swelled, and he fell into a Fever, for which reason seeing he was Plethorick and strong, a Vein was opened with a Lancet, upon which the swelling and redness forthwith abated. Our next care was, that the Bowels might suffer no damage by the base and sharp Quality of the Lime, therefore Oyl of sweet Almonds with Syrup of Violets of many Infusions was given him, and emulsions of Almonds were prescribed him; Clysters were given him &c. By the efficacy of which Remedies, and by the Blessing of Almighty GOD, he was safe in two dayes time. There remained only a privation of his sight, which the other Physicians, who were called into Consultation, ascribed to the corrugation and dryness of the Membranes caused by the Lime; I ascribed it only to the sticking together of his Eyelids, which were wonderfully swelled. The fifth day after his mishap decided the Controversy: The Child loved a Foal that was in the Neighbourhood, the humming whereof when he heard, as it passed by, he would have it brought to him; when he perceived it was near him, he rubbed open his Eyelids, with that violence, that, to our great joy, we quickly perceived he had not lost his Sight. The pleasant remembrance of my dearest Son's Recovery induced me to rehearse the whole Story, though not altogether so much to the matter in hand.

V. He that is Suffocated and destroyed by Smoak, will be cured by the correction of hot and fatning Things. (*Haly pract. l. 6. c. 4.*) i. e. of very nutritive Things, as some interpret: I think indeed they prescribe fat Things, because of the sharpness of the Smoak. A fume also of some cordial Spice, with a mixture of cold things therewith, is good; such as Water-Lily, and Poppy, because they resist the manifest quality of the Smoak, which is hot and dry. And some in this Case order Bleeding after two dayes. But such, and they that are pent up in a stinking Air, must immediately be carried into the open Air, and be refreshed with sweet Scents. ¶ A Country Fellow, when he had admitted the smoak of a Coal to the Sealing of a Room, that was newly Built and Plastered, and had laid there one Night, was found in the Morning almost Dead, without Pulse, Motion or Sense, all cold, with froathing about the Mouth. Although I reckoned there was no place for Remedies, yet however I would try the Cure. And first of all, I bled him in both the Arms: I applied Cupping-glasses to his Hips and Legs, and then dolorifick Ligatures. I also ordered Suppositories; and when at first the Blood would not run, I ordered Clothes wet in warm Water to be applied to the Incision, upon which the Blood by little and little began to run. And because

Forestus. l. 13. Obs. 26.

the Pulse returning a little in the very opening of the Vein, indicated that I should suffer the Blood to run freely, I took away almost 2 Pounds. While these things were in doing I ordered him to be fanned, and cold Water to be thrown in his Face: Afterwards, when his Pulse grew better, I ordered him an Issue to be made in his Neck, by which Remedies he recovered in a short time.

D. Panarolus. Pent. 1. Obs. 19.

VI. I think, they that are suffocated with the steam of Must, are hurt rather in their Brain than Heart; for some in the like Cases have after their Cure gone mad and fallen into a Fever. And besides, I have observed such Steams, as they came from the Fats, have pierced the Root of my Nose, like Needles. Thus by the steams of Sulphur, Birds fall from the Trees. If any Man be called to visit such Patients, let him order cold Water to be thrown upon them, let them be kept long unburied, because many have been buried alive. ¶ I judge, that in Beer, upon the account of the Hop, yea, and of the Mault, as also in Must, sulphureous narcotick exhalations do evaporate by Fermentation, as it usually happens in metallick Mines, and medicated Springs that are shut up. But how may we immediately relieve such, this is our business? Immediately therefore the ambient Air must be ventilated on all hands, by which means I remember a Woman that was thus Suffocated (being treated as one Apoplestick) when the Doors and Windows were set open, and the Croud of People about her removed, came to her self again; and now for these ten years has not suffered the like. Let the Mouth, if shut, be forced open, and let Treacle dissolved in *Aqua Vitæ*, or in some cephalick Spirit be poured in: Let Sneezing be provoked with powder of *Euphorbium* and Pepper: Let a Vomit be given of some emetick Syrup, or a decoction of Radish and *Afarum*: Let the extreme Parts be rubbed with spirit of Lily convall, and let new Spirits be created by Cordials and Cephalicks.

Borellus. cent. 2. Obs. 5.

G. Horstius.

VII. I visited a Patient very near Death, Sleepy, without Sense or Motion about 30 years old. And when as there appeared some hope in letting him Blood, because he was a full bodied Man; yet because the senior Physician refused it, it was omitted, but that the innate Heat, as he said, might be raised again, he prescribed a Clyster, Ligatures, Blisters, Cordials, &c. which when daily administered, the Patient died. When his Body was opened, there was no internal hurt, but all his Veins were turgid and swollen to an immense bigness, so that some Veins, which in others are small, were in this Body as thick as ones Thumb: Therefore the Suffocation of the native Heat came from the abundance of Blood.

Panarolus. Pent. 1. Obs. 18.

VIII. A Cellar-keeper of *Anhalt* complained of a straitness of his Throat, as if he were choaked. By reason of the Life he led, there was suspicion of Fumes arising from some bad Matter that stuck in the Coats of his Stomach. Pills were prescribed him, which while they wrought upwards also, he vomited Worms, and afterwards was very well.

Salmuth. cent. 2. Obs. 40.

IX. Suffocations may happen even to Men from the Swelling of the Gland called *Thymus*; but the swelling of it does often choak hysterick Women, unless they be relieved by Bleeding.

Riolanus.

X. If there be imminent danger of Suffocation from poysonous Mushromes, a Vomit must immediately be given of decoction of Radish and *Oxymel*: Or half a drachm of Salt of Vitriol may be given with three ounces of *Oxymel*: Afterwards let Wormwood and Baulm be infused in Wine and give the Wine. *Sanctorius* says, nothing is better than Oyl of Citron Peel. When Suffocation had taken *Pausanias* his Girl, *lib. 7. Epid.* after eating a Mushrome Honey and Water hot, and Vomiting, and Bathing,

Eccc

did

did her good: In the Bathe she vomited up the Mushrome; and when the Symptomes ceased, she fell into a Sweat. A Matron being almost Choaked with bad Mushromes, had breathed her last, had not I relieved her with Oyl drawn from Citron Peel, the Passages of her Breath were so much stoppt with gross Fumes from the bad Mushromes.

Blasius ap-
pend. ad Ve-
lingii Anat.
part. § 190.

XI. I think it is no absurdity to say, that Men sometimes have Fits like to Hysterick ones: The Cause whereof proceeds from the small Gut, in which through the vitious effervescency of concurrent Humors, especially of a too austere pancreatic Juice, Wind and Vapors of the same Nature arise: And when they rise to the Oesophagus, they so straiten it, that the Patients apprehend themselves in danger of Choaking.

Höfserus l.
11. c. 2.

XII. In the greatest fear of Suffocation in Flatulent and hysterick Fits, put the Patient's Feet in warm Water, and you will immediately find him breathe better.

Suffocatio, Affectus hysterici, *Hysterick Fits*, or *Fits of the Mother*.

The Contents.

- Whether Blood may be let in the Fit? I.
Cupping-glasses must not be set above the Navil. II.
Whether a Vomit be convenient? III.
Whether Purging? IV.
All hysterick Women are not benefited with stinking Things, nor all offended with odoriferous things. V.
Whether Trillations and Frictions of the Pudenda be lawful? VI.
Whether the Mouth and Nose should be stoppt? VII.
Whether pouring cold Water upon the Abdomen may be Practised according to Hippocrates his Mind? VIII.
This Disease must not always be resisted by Heaters. IX.
With what Caution Narcoticks may be used? X.
Sicapisms good to prevent the Fit. XI.
The efficacy of Castor. XII.
Perfumes as Musk and Amber, whether alwayes hurtful? XIII.
The efficacy of Musk taken inwardly. XIV.
Remedies must be timorously administered to Women with Child. XV.
A Relapse must be prevented. XVI.
The efficacy of Antimonium diaphoreticum. XVII.
An hysterick Fit often mistaken for one of the Spleen. XVIII.
Camphire is not good for all. XIX.
Laudanum does Wonders. XX.
Medicines.

Capivaccius
l. 4. c. 10.

I. IN a Fit from the retention of the *Menses* a Vein may be Breathed. Not many days ago I had a Woman in Cure, who was taken with a Fit eight times a day, and another Physician, who was there, would not admit of Bleeding; yet she was Bled against the Physicians Will, and she Recovered immediately. Wherefore in such a Case we may Bleed with boldness, otherwise many Women might Perish.

A Castr. l. 2
c. 1.

II. Cupping glasses, with much Fire, must be set to the Thighs without Scarification; and then to the Groin on each side, for when they are set to these Parts, they draw the Womb down, because of the Ligaments. But they must not be set above the Navil, as some, through a great Mistake, do: for either they will draw the Womb up, or keep it up, when it is so: Yet they may be applied between the os pubis and the Navil on each side.

III. *Aetius* commends a Vomit, but it may be a question whether it be convenient: For if the morbid Cause be lodged in the Womb, it is scarce

credible, that it should be drawn to the Stomach through so many windings and turnings and so be evacuated. To evacuate the antecedent Cause by reason it does not as yet cause a Fit, will do but little good. Besides, Vomiting in the Fit draws the Humors upwards, and disturbs those in the Womb, and so may make the Fit the worse. Nevertheless it is certain that a Vomit does good as well in the Fit, as out of it: for as Sneezing does good by the Motion and Agitation, so does a Vomit: for in the act of Vomiting, not only the morbid Humors, which cause the Mischief, are evacuated, but also by the straining of the Muscles of the abdomen, the Womb is forced downwards, and the Vapors arising thence are dissipated. And seeing the Womb is easily offended with all manner of things, the Cause does not alwayes ly in it, but sometimes in other Parts also, which provoke the Womb by their caeochymie, to inordinate Motions, as hysterick Women often complain of ails in their Spleen. If therefore the Cause ly any where else than in the Womb, it may be excluded by Vomit, and so it will be convenient, as well upon account of the conjunct, as antecedent Cause.

Primicofius,
de morb.
Mul. l. 3. c. 6.
11.

IV. I have long since by experience found that such Symptomes as these are much exasperated and increased, and others also superadded, by sharp and violent Medicines. Wherefore it is my Advice, that you alwayes use gentle Medicines in them (although the Fits be Violent) by which Method I have seen several restored to Health beyond expectation. ¶ That the Womb is grievously affected by the Guts, has been my Observation, for when a Purge has been given to them that are subject to Fits, they are usually most grievously afflicted. ¶ If Fits arise from corrupt and poysonous Humors, there is no better Remedy then often to purge the Body, according to the Condition and Nature of the peccant Humor. Here we must consider from what Parts such Excrements flow into the Womb, and what they are, that we may help so great an Evil. A Vomit seems here peculiarly convenient in my Opinion, because when all the Excrements of the first ways are purged, revulsion is made from the Womb: but not so in other Causes: because neither abundance of Blood nor Seed can be amended by Vomiting, unless by Accident. ¶ *Pilula fatide majores*, though they be purging; yet half a drachm of them may be advantageously given in the Fit: for they evacuate gently, and use not to purge, till the Fit is first over; so that you need fear no danger from the Working.

Mercatorius
de indic.
Med. l. 1. c. 6.
Hurnius

Augenias

Riverius

V. *Camerarius in horto suo* is the Author, that Angelica with Zeodary given in Wine is an excellent Remedy against Fits of the Mother: Which as Reason denies to be good for every Hysterick Woman, so Experience will prove, that it is good for this and the other individual; for some Hysterick Women are refreshed with grateful smells, as, Balsame, Cinnamon, Amber and Musk; on the contrary, some are brought into great danger by *assa fatida*, Castor, and the most common and famous Remedies for uterine Symptomes. Of which Matter I shall produce two contrary, but singular Examples. A few years since I was called to a Matron, who was taken with exceeding violent hysterick Symptomes: To whom when I advised, that they should besides a Galbanum Plaster, which the Women had applied before I came, give her also some Hysterick water, and should hang about her Neck a piece of Castor, tied in a thin Silk, that they should burn some Partridge Feathers or roste some Nutmeg; Then she replied with a whispering Voice, Must I then, who cannot bear the smell of an hysterick Plaster, bear moreover these stinking Things? Certainly I shall be Killed, who use to be refreshed with the smell of a Nutmeg, but unburnt. Wherefore I carefully enquired of her, whether or no she was offended with

with *Spanish* or *Italian* Gloves, that smelled of Liquid Amber? But she replied, that nothing could come more grateful to her. I ordered therefore the *Galbanum* Plaster to be pulled off, and to apply in its room another sweeter scented, of *Tacamahaca*, and instead of *Hysterick* waters smelling of *Castor*, I recommended to her *Citron*, *Cinnamon* water usual in this place, in a spoonful or two of which I gave a scruple of *facula Bryoniae*, and indeed the Symptoms abated, till she applied the following Liniment, taken up in Cotton to her *clitoris*; Take of black Balsome of *Peru*, Oyl of *Jasmin* not rank each 2 drachms, the best *Civet* half a scruple. Upon the use whereof her most urgent Symptoms as the Inflation and rumbling of the *Hypochondria* and of all her Belly, *Vertigo*, difficulty of Breathing, Swooning, &c. ceased; yea, she was free of whole Months, whereas before, now and then she was taken with them, and especially when her *Menfes* were at hand. The latter History contrary to the former is thus; Once when I went into the Country, it happened that I turned into the Royal Mannor of *Ipsbury*, and there I found some of my familiar Friends making merry; being admitted into the Parlor, where the Women were; and holding in my left Hand the Herb *Monarda* or *Orebia odorata moschata* Jo. *Brachini*, which smells of Saffron and Musk, tied in a Nofegay, lo, all the rest being silent, one of them, all on a sudden, began to complain of the fragrantcy of my Nofegay, and desired me to put it away, affirming she could not bear it, and I readily obeyed her, fearing that she being Barren (for Barren Women and old Maids, it is plain, are subject to uterine Symptoms) might fall into Fits. Therefore they that practise Physick must avoid sweet scents, when for the most part the weaker Sex is easily offended with sweet scents, but not at all with strong ones.

VI. Whether it be lawful to use Titillations and Frictions, and so to irritate Nature to void the Seed, let Divines inquire. It is no absurdity to believe it lawful, because then the Seed is voided, against the Womens will, and without their consent; and such Seed is not at all prolifick, but the poyson of the Body: not only an useles, but also a noxious excrement, as we take away Blood, the matter of Seed, and all Morbifick matter: And the Cure cannot otherwise succeed: Why may not it be lawful in the like manner to evacuate Seed, when it proves the cause of so dangerous a Symptome, as we do other Morbifick causes?

VII. It is an usual thing also for some to stop the Mouth and Nose, and to stop the Breath, that so Nature may be excited, which is said to have been the opinion of *Haly*: which yet to me seems dangerous: for when Breathing is almost abolished, it cannot be wholly stopt and intercepted without hazard of the animal. Some think this Remedy is not of use in the *Pæroxyfin*, but just before it comes; because by the retention of the Breath the upper Parts force their excrements to the lower, as appears in making water and going to stool, and in such as have a Rupture: for by holding ones Breath they are expelled with more violence. It is probable also that the same happens to the Womb. Yet *Vallesius* approves of it in the Fit, so the holding ones Breath be but short, gentle and interpolated, for so the innate heat being strengthened, disperses *Hysterick* Vapors, and drives the Womb to the lower parts. But *Sylvius* is so far from thinking that the Breath should be held, that he rather thinks it the best way to blow in ones Noftrils, for he says, that makes the Womb go down immediately.

VIII. A certain healthy, and corpulent Woman, after she had taken a Medicine to make her Conceive, was taken with a pain in her Belly and with griping in the Guts, and she swelled: There was shortness of Breath, and perplexity of pain, and she swooned five

times, so that she seemed dead: nor did her present pain or difficulty of breathing abate by giving her a Vomit with cold water. But about 30 *Amphora* of cold water were poured on her Body, and truly this only seemed to do her good, and afterward Bile came plentifully downwards: But while the pain lasted, she could not go to stool, and she lived. About 30 *Amphora* of cold water were poured on her Body. A wonderful thing, and which could never have been attempted, but by a generous Physician: for an *Amphora* holds eight *Congii*, a *Congius* holds six *Sextarii*, and a *Sextarius* holds twenty ounces.

IX. Chymists commend *Vitriolum Martis* for this Disease, and they give a grain or two of it with a double quantity of Sugar for many dayes in Wine or some proper Liquor, yea, it may be given to 12 grains with some proper Conserve. Cream of Tartar given frequently is very good to cure this Disease. These two Medicines do good not only by opening but by cooling: For in this Disease there is often a hot intemperature fixt to the Womb, arising from Blood retained within its Veins and heated. As *Galen* says there is an Inflammation of the *Hypochondria* in *Hypochondriack* Melancholy, from the Blood retained therein by obstructions and over heated. Therefore things which may cool the Womb are most proper here, such as *Semicupes*, Vinegar and water taken in at the Mouth and by way of Clyster, and such like. A *Cholerick* Woman 20 years old; when she was oppressed with a Fit and had her Face red, was immediately Cured by a Clyster of Vinegar and water. A certain Maid was suddenly taken with a most grievous pain, which afflicted her Right side and Loyns so cruelly, that she was forced to roar out continually. Because there was no Fever, I believed it was an hysterick affection: I therefore immediately gave her a Glas of Oxycrate, which within a quarter of an hour she Vomited up again with much Phlegm: When her Vomiting was over, she drunk another glass of Oxycrate, and her pain immediately vanished, and she was perfectly cured. ¶ Here the History may be added, related by *Harvey* in his *tract. de partu* of a Woman who was long sick of *Hysterick* Symptoms, that would yield to no sort of Remedies, who after many years at length recovered her health by the falling out of the Womb; Because the Womb being exposed to the external Air, was cooled, and so its inflammation and hot intemperature was abated.

X. The following Pills are very good in a very violent fit and use certainly to stop it; Take of *Assa fetida* 1 scruple, *Castor* 6 grains, *Laudanum* 3 grains. Make 3 or 4 Pills, let her take them presently. ¶ *Horsius* tom. 2. p. 398. advises well, that in making up *Laudanum opiatum*, part of it be kept without Saffron, that it may more safely be given, which has often cured sick Women to a Miracle.

XI. Blisters applied to the Hips are of use to prevent Fits: But I have often observed that *Sinapisms* applied to the Hips 2 or 3 hours before the Fit have diverted it, which is a Remedy of less trouble.

XII. Like as, where the said Suffocation is urgent, *Castor* is deservedly preferred before many other things, and its Tincture with rectified Spirit of Wine, and Spirit of Sal Ammoniack; so, where Cold is very urgent as well outwardly as inwardly, as in a *Syncope* and Diseases of that nature, above all things that I have hitherto yet known I commend the distilled oyl of Cloves, which is not ingrateful, nor do I disapprove of the oyl of Turpentine, which is less grateful, seeing mixt with Spirit of Vitriol it raises an effervescency accompanied with great heat. Let this mixture serve for an example; Take of Water of Penny-royal 2 ounces, *Theriacalis simplex* 6 drachms, Tincture of *Castor* 2 drachms, distilled oyl of Mace, of Amber

E e e e 2 each

S. Pauli, Quadr. Botan. class. 2. tit. Angeli- ca.

A Castro.

Primifolius.

Hippocr. 25. Epid.

Vallesius.

Riverius.

Horsius, Here. Med. l. 7. c. 2.

Fortis.

Sylvius de le
Boc. prax. l.
1. c. 19.

each 3 drops, Syrup of Fennil half an ounce. Give it by spoonfuls, it is good also in Hypochondriack Diseases. One scruple of Spirit of Sal Ammoniac may be added to this mixture, which will make it much stronger; or a narrow mouthed Glass containing the said Spirit, may be held to the Nose, for by its sharp smell People are got both out of Fits and the falling sickness.

Hortius,
N. 1. Obs. 26.

XIII. I observed in a Matron a most grievous Aphony often returning, with Convulsions; She had been Barren many years, and upon the approach of her *Menses*, was taken with a most grievous Fit of the Mother, then with a small Epileptic, at length with partial Convulsions of Hands, Feet, Back, and horrible ones all the Body over. She upon using of proper foetid, uterine Medicines, fell into more grievous Symptoms: for which cause we fell to Perfumes, Musk, to wit, and Amber, and we gave them in a small quantity with other Cephalick strengthening things with good success. Which should also be observed in other Hysterick Women: that is, in such, whose Head and Nervous kind has been weakened in their youth by Epileptick Fits, or some other cause.

Solenander,
Selt. s. conf.
5. §. 10.

XIV. A Woman was afflicted with most cruel Symptoms, Head-ach, Belching, contraction of the Body, pain in her Groin, gnashing of her Teeth, sometimes falling to the ground speechless, her Mouth shut, so that she could not open it, and all these things from the fault of her Womb. She having tried many Medicines to no purpose, an old Woman coming in gave her 13 grains of Musk and as many of common Dragon's blood in 4 drachms of Orange flower water, she was cured, and never after had any Fits. I have given the same Medicine in the like case, and it alwayes did good: I have given it several times.

Riverius.

XV. In the cure of a pregnant Hysterick Woman we must take great care that Remedies be prudently administered, and that violent and very foetid things be not given, lest abortion be caused. And the business must be done more by external than internal things.

XVI. *Aetius* well advises, that a Woman when she has recovered her health, should not wholly be neglected, but for preservation sake she should use Medicines at certain intervals, especially at suspected times; so that the use of them should not wholly be left off, but the quantity abated.

Doringius.

XVII. I and Dr. *Dobritius* had a Woman under Cure of Fits of the Mother, who had a very foul Body. She was taken about Night especially with a straitness about her Stomach, her Heart was oppressed, and almost all her Limbs had a tingling in them, her Head also aking. Various things were tried by us, the Humours were prepared, evacuated, strengthening things were given, yet we did no good. At length through my perswasion, we gave her *Antimonium diaphoreticum*, upon taking of which she began by degrees to amend: We continued it for a Fortnight, in which time she was so much relieved, that because she was better, and grew weary of Medicines, she had rather commit the rest to Nature than longer insist on Medicines. I ascribe her recovery chiefly to the Antimony. She indeed is well now, but not without complaints of a weariness in her Limbs.

XVIII. We often meet with Women, who think they are ill of the Spleen, when they are Hysterick. By Hysterick Affections I mean these Symptoms, that happen not in the Womb it self, but in other Parts which have a Sympathy with the Womb: for the Womb has some Sympathy with all the Parts, especially with such as are contained in the *Abdomen*, to which it is joyned by its Veins, Arteries, Nerves, Membranes and by its Ligaments, from whence, because of some vitious Blood, Seed or other Humours foul vapours expire into other Parts. And there is a very great Sympathy be-

tween the Spleen and Womb by the Arteries, whence come Hypochondriack Ails, rumblings and pains of the Belly: And this Sympathy is so frequent and familiar, that many say, they are only Sick of the Spleen, when the Disease is in their Womb. ¶ A Maid of a Melancholick nature had for several years been troubled with violent Fits, that returned often; Most Physicians thought this mischief came from Malignant Vapors, bred in the Spleen, and rising to the Diaphragm. It so happened, that the Patient was held almost a whole Night with so violent a Fit, that they thought she would dye every moment. I suspecting it to be a Fit of the Mother, gave her compound Balm water (which is much in use among us.) I poured 2 or 3 spoonfuls of it into her Mouth: she came to her self to a Miracle, and all her difficulty of Breathing ceased: Whence we knew, it was an Hysterick Fit.

Erasmiofius.

Thonerus,
Obs. 2. l. 3.
p. 185.

XIX. I was called to a Matron, who was dangerously ill of Fits, I found her lying with her Eyes shut, and speechless: I immediately prescribed her *Aqua matricalis de Melisa Composita*; instead whereof through the Apothecaries mistake *Aqua matricalis camphorata* was sent, a spoonful of which when I had poured into her Mouth, she began to complain as well as she could, What do ye do? Then all her Head burnt as hot as Fire. But when the other *de Melisa Composita* was brought, and given the Sick Woman, she immediately recollected her self, began to open her Eyes and to speak, and was recovered to her former health. Now though Camphire in some Hysterick cases be no ignoble Medicine, yet you may find many Women, to whom it is an Enemy, especially such as have a hot Head, for by reason of its volatil Spirits it presently flies to the Head. This Patient was of a Sanguine Complexion and ruddy Countenance.

Idem,
Obs. 3.

XX. *Laudanum* is admirable in Vapors, that Sympathically annoy the Brain, especially in Fits of the Mother, mixt with Hystericks. *Madamoiselle de la Font* after her Labor, was tormented almost to death with violent pains in her Belly, an irregular motion of her Womb, and with foul Vapors that annoyed and got up into her Brain; when she had taken many Medicines to no purpose, as soon as she came to me, she took *Laudanum*, she slept, and all things were well: Afterwards every Morning she used this Mafs; Take of *secula Bryoniae* half an ounce, *Cassia* 2 drachms, *Myrrhe* 1 drachm, *Asa fetida* and *Saffron* each half a drachm, *Laudanum* 4 scruples and an half. Make a Mafs; of which let her take 25 grains. She used an Hysterick Fomentation twice a day. When her Fits were quieted, she recovered very well. ¶ *Madame de la Varenne* was troubled with Malignant Vapors and a great pain in her Womb, with a great Swelling and very painful about her Guts and Mesentery, and she was almost in a Consumption: At first for every other day, afterwards a little longer space between, she took *Laudanum* for the Symptome, and *Mercury* for the cure of her Disease; She recovered, when she had taken the *Laudanum*; She vomitted viscid matter every day. It is good in a flatulent Hypochondriack illness.

Theod. de
Mayerne,
traët. m. f.
de Laudano.

Medicines especially made use of by eminent Physicians.

1. This is an experiment which never fails; Take every Night before Supper *Pilule de Artemisia* 2 scruples. ¶ Take of *Siler*, *Madder*, *Penniroyal*, *Calamus Aromaticus*, the kernel of Peony Seeds, each 6 drachms, the best Musk 3 scruples, *Spikenard* 1 drachm. Make Pills with juice of Mugwort. The Dose from 2 scruples to 4. abating nevertheless in Summer and hot Seasons, and in Cholerick Constitutions. It helps in Inveterate Suffocations especially

J. Argulanus.

pecially from the stoppage of the *Menses* and retention of Seed; after the Pills a Decoction of Motherwort and Mint in Wine must be taken.

Al. Benedic-
tus.

2. This composition does wonderfully help, as I have often tried, Fits of the Mother, and them whose Limbs are contracted from that cause. It has in it of *Tripheba magna*, dried Chamomil each half a drachm: It is given fasting in Wine or with Sugar.

Theod. de
Bry.

3. The fume of Wens that grow on Horses Legs is good against Fits of the Mother. ¶ Spirit of *Vitriolum Veneris* is a present Remedy, if 3 drops of it be taken in some proper Liquor.

Rod. à Ca-
stro.

4. Give a drachm of Treacle, which also may be dissolved in Oyl of Rue, and applied to the Part, by which you perceive the Vapours ascend, by which means only a noble Matron, when no other Remedies did her good, was cured of a dangerous rising of the Mother.

Carbæus.

5. Some say this is a never failing experiment; They take a head of Garlick, cut it in two, lay it upon the Coals, and lay on it a little *Aloe hepatica*, they take the juice and anoint the Navil, Wrists, Temples and Nostrils of the Hysterick party.

Joh. Crato.

6. In Fits of the Mother this is a singular Remedy; Take the Catkins of the Walnut tree, dry them and powder them. Give 2 scruples thereof with a drop or two of Oyl of Amber dropt on them. I know nothing better.

Pet. Joh.
Faber.

7. *Sal Jovis* is a precious Remedy and Secret against Fits of the Mother, anointed on the Navil. Three grains of it also may be given inwardly, with Hysterick water 3 or 4 dayes in the Morning.

8. Salt of Vitriol, which causes Vomiting and promotes the *Menstrua*, is an excellent Remedy in Fits.

9. A *Galbanum* Plaster is *Montagnana's* Secret. We dissolve *Galbanum* with a little Vinegar, spread it on Leather, and apply it to the Woman's Navil, by which Remedy I have cured several, and raised them out of Fits. ¶ A certain Woman, when she perceived the Fit coming, held only a piece of root of Masterwort in her Mouth, and chewed it a little, and she was freed from the Fit, but she drank a little good Wine Vinegar upon it, which made her belch, and she escaped it alwayes. ¶ We received this for an admirable Secret, to bring away the after-burthen, for the stop *Menses*, to bring away a Mole or dead Child, and it is said to have been tried in them that have kept the afterburthen 14 dayes; Take green Leaves of Lovage, pound them, put Rhenish Wine to them, strain out the juice, and give a Glas of it to drink. In the Winter time bruise the Seed of Lovage and let it boyl a little in Wine, then strain it, or (which is better) give it in Beer.

Forestus.

10. This is a great Secret. Let a Clyster be made of a Decoction of Ground-Ivy, of which take 1 pound, add 1 ounce of Mithridate, and give it. It is proper in coldness of the Womb, and when the Seed is corrupt.

P. Mich. de
Heredia.

11. Hens dung dissolved in White Wine and mixt with some Cordial has helped many.

Fr. Hofman-
nus.

12. Only the Seed of Garden Parsnep dried and powdered, and half a drachm of it given in Wine or in some Hysterick water is a peculiar Specifick for Fits of the Mother.

Querceta-
nus.

13. Equal parts of Cows and Deers dung given in warm Wine to a Woman, when she goes to sleep, presently takes away the pain, and Fits. ¶ Linen clothes dipt in Cows piss or in a Dung-hil, and applied warm to the Navil and Womb, quiets it.

J. Dan. Ru-
land.

14. If the hair of the Patient be burnt and the fume of it received, it does wonders on a sudden. I have often tried it.

Varignana.

Surditas, or Deafness.

(See Diseases of the Ears, Book I.)

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Medicines.

I. **WE** must give a Purge of some Medicine, that purges the peccant Humour violently; for, seeing the Humours are gross and impacted, they are rather disturbed than carried off by a gentle Medicine; wherefore I think, for this reason *Hippocrates* said, a disturbed Belly, that is, one very loose, cures Deafness. But we may not use such things frequently without danger, according to *Hippocrates* his advice, we must purge such with that which in a small quantity purges a great deal.

II. I have observed, that Deafness in many arises from abundance of Blood passing by the roots of the Ears. Therefore the Remedy of a certain Bath-keeper of *Bavaria* seems to me not altogether absurd, whereby, as I have been told by several, he has cured many of thickness of Hearing. And it is thus; He orders the deaf Persons to go into the Bath in the Morning, that the Veins, which are behind the Ears, may swell with the heat of the Bath: afterwards he cuts them thus turgid, and takes away as much Blood, as he thinks fit, to the great benefit of such as are troubled with thickness of Hearing.

III. If any one be deaf, who has a hot and dry Head, I would not purge his Head: It is sufficient to take away the matter below, and hinder it from ascending; for so the Head may easily be cured; and so I would do nothing to the Head, neither give sneezing, nor gargarisms, much less pump it, nor any thing else.

IV. In a very stubborn Disease we must proceed to Fluxing with Quick-silver, that if possible, the matter that causes the Disease, may be purged by the Mouth: for Deafness caused by the Pox is so cured, and perhaps, where that is not the cause, it may also be thus cured. ¶ Reason tells us as much; for Quick-silver softens and dissolves hard Tumours, and most powerfully dissolves Humours that are concrete and settled in the Parts, and so perhaps may dissolve Phlegm, concrete in the Ear, when it will not give way to other Remedies. Yet this Remedy must not be tried but in a desperate case; for its event is very hazardous and dubious: because the Brain is much damaged by anointing with Quick-silver, so that either deafness or thickness of hearing takes some, who are cured by fluxing; although, as is said before, Deafness caused by the Pox is sometime cured by fluxing: And fluxing well managed, after sufficient purging, seldom leaves any hurt in the Brain.

V. The cure ought not to be the same in Childbed Women, such as are upon recovery from Sick-

Oethaus,
apud Schen-
ckium.Montanus,
Conf. 152.

Fonsicai.

Riverius.

ness, and others, by reason of the diversity of causes affords divers Indications for cure. For in Women in Travel, the animal faculty does its utmost to deliver the Child, therefore there is a great Influx of animal Spirits about the spinal Marrow, to be distributed into the Nerves of the Muscles of the lower Belly. This intense violence of motion is the cause, why the origination of the Nerves, especially about the hind part of the Head, is affected, to wit, where the spinal Marrow descends: Now the Nerve of the fifth Conjugation, which is allotted to hearing, has its original there, and by a very short duct is inserted into the inner Ear. Whence it is plain that in such straining it may suffer also, and that thick and viscid Humours may after Travel be gathered about its insertion, because of the faintness of the innate heat, and the Woman's weakness by reason of her violent commotion, and seeing upon other accounts the animal faculties are weak in lying in and pregnant Women. And such as are upon recovery, have their concoctive and alterative faculty weakened, wherefore there is a produce of many Vapors from the weak heat, which, when they get into the Organ of hearing, cause a depraved sense. In lying in Women therefore it must be our care that they cleanse well; we must have regard to the whole by preparation and evacuation of the Humours, not neglecting outward applications, that the matter gathered about the Organ of hearing may be cut, dissolved and spent. In convalescents it is sufficient that the innate heat be fortified: But if the Disease go not away of it self, gentle dissolvents should be used.

Horstius,
prob. 4. dec.
3.

VI. The cure of Deafness and Noise should be attempted rather by dry than moist things, because by actual humidity the Tympane is made lax, the implanted Air is thickened, and the cause of the Disease increased. Wherefore suffumigations of Saffron, Myrrhe, *Syrax*, Benzoin and Frankincense are approved by *Hercules Saxonia Panthei lib. 1. cap. 20.* And *Joh. Zmeller* has regard to the Tympane, *Aqua Acoustica Mindereri*, says he, if it must be made use of, I think neither it, nor any thing else, should in any quantity be poured into the Ear, seeing the Membrane expanded upon the annulus and the little Bones underneath, called the Tympane is very thin, so that very easily it may totally be destroyed and eroded by pouring in of sharp Liquors, and so the hearing be quite destroyed. Therefore I think it more advisable, says *Schneider lib. de Cathar. special. p. 99.* that a piece of a wheaten Loaf new drawn out of the Oven be sprinkled with this water and applied and bound hot to the Ear, that so the heat of the bread and the spirituous water acting together, the gross Humours which obstruct the auditory Nerves and Passages, may be incised, attenuated, and evacuated by insensible transpiration, or, being driven back to the palate, by spittle. Wherefore in such cases it would not be amiss to take this water into ones Mouth, for the greater attenuation and attraction of the gross Humours from the auditory passages (got within the Tympane) which can never get out at the Tympane without hurting and eating it through.

VII. *Joel l. 2. praef. S. 2.* commends for Deafness, all things requisite premised, a Sudorifick draught of *Theriac Andromachi* and Rue water. *Osw. Grembs l. 2. c. 1. S. 11.* in imitation of him commends a Sudorifick cure of a Decoction of the Woods to consume the moisture of the Brain. This I have proved by experience, that, if deaf Persons have a thick and cold Humour impacted in the auditory Nerve or in the Tympane, all things requisite being premised, Bathing is good, to sit in water up to the Navil, not too hot, but only that the parts may be warm and the Blood rendered more fluid. A little after, 2 or 3 drops of Apoplectick Water must be dropt into the Ear on the side affected, and so

you will see your Patient cured out of hand. For the Sick say, that after the use of this they feel as if something had fallen out of their Ear.

VIII. Oyl of bitter Almonds is commended indeed in Deafness and a Noise in ones Ears: But because of the windings in the Ear, we must be cautious in the use of it; For when it is got to the Membrane of the Tympanum, because it cannot easily be wiped out, it makes the Membrane lax, and so does not only not cure, but encrease Deafness. It is my opinion, that no unctuous things should be dropt into the Ears, lest the membrane of the Tympane growing thick, should make dull the hearing, whose excellence consists in dryness. All Membranes whether they be softened with oyl, or be often wetted, are puffed up and grow white. If it be thought good to use any Oyls, the exhalation of them is sufficient, without pouring in of the substance, by which evaporation the implanted Air, when inspissated, will be sufficiently attenuated with the adventitious.

S. Pauli,
Quadrup.
Botan. p. 99.

Th. de May-
erne, consilio
pro surdo. M.
S.

IX. Sulphureous and bituminous Bathes, as well by way of Bath, as by washing of the Head, are good for the Cure of this Disease: for by Bathing plenty of Sweat is provoked, and the antecedent matter of the Fluxion is discharged: And by washing of the Head the Brain is strengthened and dried. The peculiar way of using them is described by *Pennotus*, and is very much commended. Nothing does so much good in Deafness, even after the use of an Hundred Remedies, as for the Patient first to cleanse his Body well, and then purge his Head, and wet his Head with Sulphureous Bathes in this manner. Let him wear upon his Head, as it were a Cap of large Sponges sewed together, coming down to his Eye brows and below his Ears: Let him sit under the current of the Bath, and turning a Cock, let him receive the water, which soaked up by the Sponges, will keep the Head warm with its continual heat, and opening all the sutures of the Head and commissures of the Ears, it will take away the Vapours or will waft by exhalation the matter impacted in the Nerves, and auditory Passages, or will so displace it, that it will quickly go away. It is convenient for him to sit thus twice a day for two hours, and then presently to sweat in Bed, and to use a thin diet of Fleish Brothes, and he must abstain from all Wine, unless it be very small. If any one insist upon the use of the Bathes, I utterly disapprove of putting the whole Body into the Sulphureous water, because of the frequent effusion of Blood by the Hemorrhoids, but especially because of the Stone, for which the heating of the Kidneys and Loyns is very bad. I think it sufficient, if the Head (the Body being first well purged) be watred from on high, all cautions observed, which the Physicians there present shall give. My Lord seems to abhor the thick fuliginous Air of the Bath: An Embrocation from on high by some proper Instrument will serve instead thereof, out of which some Cephalick Decoction may run at a Cock, prepared with a Barber's Lixivium, adding Malmsey Wine, upon the Head shaven, and covered with a Cap made of soft Sponges, with other things, which may keep the Liquor from the Parts below, and may deliver it into a basin near it. This irrigation also may be received upon the sutures of the Head naked, which, when the season of the year is heat, done once or twice a week, wiping and drying the Head very well after it, will be very good. It is used daily by the Italians.

Riverius

Th. de May-
erne, consilio
M. S. pro
Comite Den-
bigh.

X. In Deafness from pituitous matter some Topical Medicine must be put into the Ears, which at first must have an inciding and deterfitive, and then a drying faculty, that the Humour which is in the Ears may be attenuated and cleansed, and then the Membrane may be dried. Therefore let a Tent dipt in *Oxymel* of Squills be put especially in the Night time, for Medicines must not be poured in, lest the auditory passage be hurt, as *Galen 3. K. T.* 1. advises, but they must be got in with a Tent or a Probe wrapt in Wool.

Fortis tom.
2. Cent. 1.
conf. 79.

Medicines

Medicines especially made use of by eminent Physicians.

1. A Decoction of Castor and Laurel-berries mixt with a little Vinegar, and dropt into the Ear is admirably good. ¶ Ants Eggs bruised will cure the most inveterate Deafness.

Donatus ab
Altomari.

2. *Prævotius* has Saffron and Cloves with juice of Woodbind for a Secret, with which I use to mix Rose-water, dip Cotton in it, and put it into the Ear.

Thom. Bar-
tholinus.

3. This Tent is a most effectual Remedy; Take of *Coloquintida*, white Hellebore each 1 scruple, *Euphorbium* half a scruple. Mix them. Make a Tent with Honey, juice of Onions or Radish, and keep it in for some dayes.

Capivaccius.

4. In the diminution of the Sense of Hearing; Take of Leaves of *Carduus benedictus* dried 1 handful, sprinkle them with wine, then pour some *Carduus benedictus* water to them, and destill them in a Glasse. Warm a little of this in a Spoon, and hold the Head a little on the contrary side; then let it run out again, and keep the Ear always stoppt with Cotton and Musk.

Crato.

5. Snails with long Ears, and an exquisite touch, if they be boyled in water and salt, and after they are dried be destilled with Oyl of Amber, or Fenil or Castor; The Oyl that comes off is admirable for the recovery of Hearing.

Deodatus.

6. The Steam of boyled Beans received into the Ears is said to be a present Remedy. ¶ Nothing is more certain than spirit of Turpentine, if you drop a few drops into the Ear.

Grulingius.

7. If it come from gross Humours obstructing the Auditory Nerves, destilled oyl of Chamomil flowers is a generous Remedy, a few drops whereof may be dropt in warm.

Joel.

8. Take the fat of an Eel as she is roasting on a Spit and it drops from her, mix it with its own Gall, keep it in a Glasse, when there is occasion, drop a drop or two in the Ear. It is a specifick Medicine for Deafness by what means soever it comes.

Dominicus
Leo.

9. After the Tympany is cleansed, and some Liquor poured in that discusses wind, nothing is better than the Urine of an Hare dropt in warm, the frequent use whereof has done several good.

Tulpius.

10. Several, who had been long Deaf, have been cured with this; One gave *diaolibanum*, and he made a steam under the Ear of a Decoction of hot Herbs, if it came from a cold matter; but of cold Herbs, if it came from hot matter, and he fomented the Ear with the simple Decoction. Afterwards he dropt in this; Take of white Hellebore, Castor, Pellitory of Spain, nitre each a like, mix them all and boyl them in wine till the wine be almost consumed, strain it, and drop a little of it hot into the Ear, and keep it there an hour, afterwards give some sneezing of powder of white Hellebore or Pepper: When the Patient begins to sneeze, let him hold his Nose violently, that he cannot breathe, when he sneezes.

Villanovanus

Swooning caused by the Spleen, cured by looking to it. VI.

By what virtue Medicines act, that cure it? VII.

If it come from the Stomach, things concentrating the Spirits are proper. VIII.

The efficacy of Aromatick Oyls and Volatil Salts. IX.

Spirit of Roses does not cool. X.

They that dye away must not be quickly buried. XI.

All Swoonings that proceed from the wasting of the Spirits must not be cured one and the same way. XII.

If it proceed from pain, Narcoticks are sometimes proper.

XIII.

Medicines.

I. Whether may Blood be let when People are in a swoon? In a spurious Syncope, which the stopping of the Blood in the Veins breeds, which according to *Hippocrates* and *Galen* l. 4. acut. must be esteemed twofold, one from store of Blood in the greater Vessels, another only from the *Carotides* and jugulars, Blood must immediately be taken away, ere it being deprived of its Spirits, become concrete, and the Disease be incurable, as much as convenient, considering the strength and fulness of the Body. Which when done, and a spare course of diet is followed, we must divert, what is contained in the Body, to the lower parts, and afterwards what concrete Blood there is, we must make it fluid with drinking hot things, and by gently rubbing the whole Body. But in this case it is very rare that one can make the Blood fluid, unless the Spirits be much stronger than before: for, if not, (or if the Pulse be bad) it is a sign that the Blood is then concrete, in which case we must wholly abstain from Blood-letting, and make use of such Remedies as may make the concrete Blood fluid, as Hares rennet in water and Honey, or water and Honey with Marjoram boyled in it, with the addition of a little *Oxymel*; or half a drachm of Treacle or Mithridate dissolved in the said water. But if you be certain that the Blood is not concrete, you can no way sooner bring the Patient to life again than by letting him Blood. Which when you have done once, if the Patient bear it well, and if the Blood run high, you may try the Remedy again, till you find the Patient relieved, but if no Blood will come, you may reckon it is concrete, and you need try no more.

II. A Woman, as she saw her Husband fighting with his Neighbour fell into a Swoon, I was called, and by my order she was cured by Bleeding. In this sick Woman the Blood had for fear and grief retired to the Heart as to a tower, by which when the Heart is suffocated, I have observed several have died, both because the vital faculty is extinguished by too great abundance, and because the Spirits cannot pass through the Vessels, for want of which the extreame parts grow dead: In so great decay of Spirits let the Physician never omit Bleeding. But if by reason of extreame loss of strength, and the abolition of the pulse in a manner, the Physician be doubtful, let Cupping-glasses be set to his Hips and Thighs with scarifications instead of Bleeding.

Fontanus

III. It often counterfeits an Apoplexy, but without rattling; nor does it leave a Pulse behind it: If it return often violently, at length it oppresses and suffocates the Heart, not only because the excursion of the Blood is intercepted, by the plentitude of the Vessels, but because some thick substance of the Blood, being forced within the Ventracles of the Heart, oppresses it, which causes an Asphyxy in the motion of the Heart and Arteries. This Disease is as frequent among the Germans as the Apoplexy, from their athletick habit of Body, which is contracted from their continual good fellowship and drinking. Yet they take no care to take down that plethorick habit by Bleeding liberally: And so no wonder, if through such abundance of Blood, they fall into an Apoplexy or a Cardiack Syncope.

Riolanus

IV. Vine-

Syncope, Leipothymia, or Swooning or Fainting.

The Contents.

Whether one may be let Blood in a Swoon? I.

One arising from a fright, cured by Bleeding. II.

Some dye for want of Bleeding. III.

Vinegar of Roses is not good for all. IV.

How Medicines must be poured in, when People cannot swallow?

V.

IV. Vinegar of Roses is not good for every Syncope, for seeing contrary causes must needs be removed by contrary Remedies, therefore it is manifest, that the dissolution of the Spirits must be cured one way, and their suffocation or infection another. Wherefore we conclude with *Capivaccius* 2. pract. cap. 9. that a Syncope coming from a dissolution of the Spirits, may be very well taken off by the use of cooling things, applied especially to the Forehead, Face, region of the Heart and Wrists, in which case Vinegar of Roses is proper, for Vinegar penetrates and Roses cool and concentrate the Spirits. But if suffocation be the cause, attenuation and dissolution of the Morbifick matter is of necessity required, which cannot at all be done by cooling things; wherefore here we must have recourse to Cresses, *Nigella*, Mithridate, Cinnamon water, rubbing the extreame parts, &c. If there be Malignity, we must provide for the Heart by Bezoricks. No wonder then if in the absence of Physicians Patients often dye in a Swoon: For it may so happen, that the Spirits, which are otherwise suffocated, may, by applying some common cooling Remedy, be further conglobated about their principle, and by this means the vital faculty may be utterly suppressed.

Horstius.

V. When a Patient is liker to one dead than alive, so that he can neither open nor shut his Mouth, much less swallow any thing as he should, then it will be the best way to take some Aromatick Oyls, either simple or compound, mingled only and stirred together a little with rectified Spirit of Wine, or more nearly joyned together by a greater artifice and long circulation, and pour 3 or 4 drops into the Patient's Mouth, and sometimes more, and especially by a Silver or Golden pipe into the Throat, to the end they may penetrate both into the Stomach and Guts (from whence the cause of so grievous an evil is often dispersed to all parts) and into the Pipes of the Lungs, to the very Blood that sticks in the Pulmonary Vessels, and so correct and amend this urgent harm.

Sylvius de le Boë.

VI. A Noble man complained to me, that he immediately fell into a Swoon, as he turned himself on his left Side, and his Spirits were so far gone, that he was got out of it with much difficulty. When I inquired into the cause, I reckoned, some Melancholick Humour, having some ill quality in it, sent a poysonous Vapor from the Spleen to the Heart, which must be the cause of this Malignant Symptome; nor was I deceived in my conjecture: For when he was put in a right course of Diet, after his Body had universally been purged of Melancholy, and particularly his Spleen by giving Medicines to open the Obstructions thereof, and his Heart strengthened, he was cured of it.

Riverius.

VII. In a Swooning Fit sometimes such things must be given as powerfully concentrate the Spirits and acid Vapors, and sometimes such as discuss glutinous ones. Subtil things, to the end they may penetrate to all parts, may be mixt with them, such are Spirituous things, and volatil and Oylly Salts, especially such as are prepared by art of divers parts of Animals, or of certain Plants. These are good, Aromatick Tinctures, drawn by means of rectified spirit of Wine from divers Spices, or from any Aromatick parts of Plants or Animals, either by infusion alone, or also by destillation, for example, Take of water of Mint, Fenel each 1 ounce, Scurvy-grass, *Agua vite Matthioli* each half an ounce, *Laudanum opiatum* 2 grains, Syrup of Mint 1 ounce, oyl of Cloves, Nutmeg distilled each 2 drops. Mix them. Give it by spoonfuls. Let no man wonder here, that *Laudanum opiatum* is added. For I maintain, that *Opium* has an excellent virtue in hindring and restraining the vitious effervescency of sharp Humours, both in the small Guts, and in the Heart and elsewhere, without which effervescence, noxious and sharp Vapors could not easily be raised,

and produce Swooning Fits. To this mixture many very efficacious things may be added, made of divers parts of Animals, Tincture of Castor, Spirit of Salt, of Sal Ammoniac, of Urine, the Volatil and Oylly Salt of Blood, Bones, Horns, Hoofs. The Oyls must be rectified, and not only in part be freed from their *Empyreuma*, but made more penetrating and potent. The rectification must be made with Spirit of Wine tartarified.

Sylvius de le Boë.

VIII. We must observe, that when Swooning proceeds from the offence of the Stomach, things that call out the Spirits are not proper, but rather things that repel them to the Heart, as throwing cold water or Rose water in the Face.

Fortis.

IX. In fear of Swooning, and in small Faintings, accompanied with troublesome cold, the following Mixture may be prepared of Shop Medicines, a spoonful to be given often between whiles, Take of water of Mint 2 ounces, *Agua vite Matthioli* 1 ounce, or Tincture of Cinnamon half an ounce, oyl of Cloves 6 drops, Scurvy-grass 1 ounce. Mix them. I do not only commend volatil Salts and Aromatick Oyls from Experience; but because reason perswades the same, drawn from the analysis of the Salts and Oyls, and from the efficient cause of this Hypochondriack suffocation, that is, viscid and acid Phlegm, or viscid, and acid or austere Vapors, compared together: For these Salts and Oyls have a virtue to dissolve and incide every viscid, to temper and correct every thing acid and austere, and to discuss and dissipate whatever is halitious and windy.

X. Spirit of Roses refreshes the Heart and Brain and revives the Spirits, one drop or two perfumes a great quantity of Water. Therefore in Swooning and Fainting, the Dose of it is from 5 drops to half a Scruple or a whole one. But some mistake and give it cool, when yet it is as hot as other Spirit, and is fully separated from the cooling parts of the Roses. For we must know that simple Medicines made of Vegetables have for the most part the virtue of the Plants whereof they are made, and may be put to the same uses, unless these Plants have different parts; Therefore Rheubarb in substance binds.

Sylvius de le Boë.

XI. We must have a care of such Patients, that we think not of burying them presently: for several have come to themselves in the Grave. Let this one Instance suffice. In the year 1582. my Host at Cleves, who lives at the Sign of the Eagle, told me, that 17 years before, he was taken with a most grievous acute Disease, and at length he fell into such a Swoon, that all men thought he had been Dead, that *Johannes Wierus* was called to him, and found that his Soul was not then separated from his Body: and therefore ordered him to be covered up warm in Bed and Cordials to be given him, and while he was busie about the recovery of his Patient, the Friends were preparing for the Funeral, but the next day he came to himself.

Hildanus.

XII. All that faint for want of Spirits must not be brought to themselves one and the same way: for it is necessary to consider in what manner the cause makes its impression and to oppose that. For although all immoderate evacuations dissipate the Spirits, yet you must cure one way, if it proceed from too much Sweating, another way if from a Looseness, another, if from loss of Blood, and another if from Vomiting. For they that Faint for Sweating or great heat, and have a weak retentive faculty, are easily raised by throwing a little cold water, or Rose water, or Vinegar, not all over their Skin, but only their Face and Hands, and that suddenly: both that the Skin being condensed, the Spirits may not waite so much, and that the Patient by the sudden retrocession of the Spirits may be the sooner raised: and for the same reason you must take care to cool the Air by throwing such cooling things on the Floor, and by Fanning it, that

that the Skin may be made close, and the Spirits be thickned. Which Remedies you must not use, if a looseness be the cause of Swooning; for by throwing cold water the Humours are driven inwards, which it is requisite to draw outwards. Nor must you do it, if one faint for plenitude or obstruction. But if it arise from some passion of the mind, which may draw the Spirits outwards, you may use the same Remedy, as if it came from Pain or Evacuation. In the same manner also you must raise the Patient by pulling him by the Nose, especially if the Humours purge downwards. If it proceed from Vomiting, you must bind, heat and rub the Legs; if from a Looseness, the Arms. Those that faint for loss of Blood you may raise by the same revulsions, and by applying warm wine to the staves in a Man, and to the Breasts in a Woman. But you may fetch these and all others again by such things as revive the Spirits, as white, thin, odoriferous Wine, diluted with steel water. If it be occasioned by Sweat, by using Sudorifics, or holding new baked Bread besprinkled with them to the Nose. But in looseness of the Belly, Bread in red Wine is of great moment, if there be neither internal Inflammation, nor a *delirium*, nor any heat. Epithemes and sprinkling of cold water by turns and intervals, lest all efflux of Vapors might be stoppt: The use also of cooling astringent things is good, such as the juice of a Pomegranate. But let them that faint for Sweat, abstain from frictions and Wine, except to smell to. To them that faint for Vomiting you must give a draught of old white or black Wine, especially if it arise from crude and viscid juices, as a draught of cold or hot water, if the Humour be bilious, sharp or salt. All which things you must do (except the revulsions) if the Patient faint through violent heat.

XIII. They that are subject to Swoon because of Pain, passion of the Mind, and diaphoretick evacuations, must use such things as allay pain; but that which does most good, is a thing that stupefies

a little: for either by stupefying the Sense, or procuring rest, it stops the Flux a little, till the Spirits are recruited, and are able to defend the Patient from the cruelty of the Pain and other accidents. But because in these Persons the Spirits are extream low, I advise to use them sparingly and with caution.

Medicines especially made use of by eminent Physicians.

1. It is good in all Swoonings to apply a large Copping-glass with much flame to the left Shoulder.

J. Cæcilius
dinus.

2. When the Body is purged, Spirit of Wine rectified and perfumed with Amber and Musk, and sweetned with a little Sugar is a good Remedy against Swooning. ¶ The Essence of Citron, Corall, Pearl, Balm, and rectified Oyl of white Amber do the same.

Pet. Joh.
Pate.

3. I use to apply the following Plaster with good success to the region of the Heart and the Wrists; Take of the Crum of Wheat bread 1 ounce, Cinnamon, Cloves, Mace each 2 drachms, *Confectio Alker-* 4 Scruples, with Rose water and a little Vinegar make a Paste, which spread on a Cloth and apply it.

Gull. Fabri-
cius.

4. Take leaf Gold, grind it an whole day very diligently with burnt Hartshorn: Then reverberate it in a Potter's Furnace, till it acquire a carnation colour. As it is a Medicine easily prepared, so in vertue it is very efficacious and is better than the most laborious preparations of Gold.

Finkius?

5. Common Salt is a most excellent Remedy, if the Lips be rubbed a little with it, or if the Patient chew it, or the Palms of the Hands or Soles of the Feet be rubbed therewith.

Hofmannus?

6. Balm sprinkled with some odoriferous Wine, heated between hot Tiles, and applied to the Region of the Heart, is very good.

Sennertus?

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A

A GUIDE TO The Practical Physician.

BOOK XVII.

Of Diseases beginning with the Letter T.

Tenefmus, or a continual desire of going to stool, without voiding any thing considerable.

The Contents.

Whether we may purge? I.
Whether we may Bleed? II.
The drying of the Ulcers with Powders. III.
Fasting is hurtful. IV.
Care must be taken to strengthen the part. V.
Medicines.

I. **P**urging seems hurtful, 1. Because it hinders cleansing and healing of the Ulcer. 2. Because it makes the Ulceration worse, which is heated and irritated thereby. 3. Purgers stimulate Nature, whereby the Symptom of vain desire is made worse. But on the contrary, oftentimes we must purge. 1. It often follows a Dysentery, because of some sharp corruption, or peccant Humours unseasonably left behind: but here Purging is requisite. 2. A *Tenefmus* for the most part happens to Phlegmatick Persons, because thick and viscid Phlegm is gathered in the *Intestinum rectum*: but this must be removed by Purging. But we must take notice that Purging is twofold, one Cathartick and another Lenitive, of which this latter is often required, because it evacuates not from the whole, but only the peccant matter in the first wayes. Then we must distinguish between the causes of the *Tenefmus*, which are often such that they stand in no need of lenitive evacuation. I answer to Argument 1 of the negative part, that it holds true of strong Catharticks which we do not allow. To the 2. That although the Ulcer be irritated by lenitives, yet the Disease is not made worse, seeing the cause of that vain straining is removed by them. To 3. that Nature is stimulated by Purgatives, yet not by vain motions, but to the end, what things are noxious, may be voided.

Horstius,
quaest. 6. dec.
6.

II. Seeing a *Tenefmus* is an affection with tension, weight, and sharp pain, wherewith the lower part of the Belly is annoyed, all which things depend upon the shaving of the *Intestinum rectum*, we must oppose it, first upon account of the matter which falls upon it, according to universal precepts, among which Bleeding first occurs, which must not be omitted: for the medical Intentions in this Disease are, to remove plenitude, to cool the Liver, abate the pain of the Guts, to stop or prevent their Inflammation, to cure the Ulcer, and, if there be occasion, to take off the Fever and other Symptomes. All which Bleeding does.

Laelius &
Fonte.

III. When the Ulcer is cleansed, it must be healed. Among Suppositories, all that are made of Metallicks are good, as Cerufs, Tutty, Litharge, Bolus Armenus, Terra Lemnia and Dragons Blood. But I had rather have these Powders blown in by a Servant with a Pipe, or with a pair of small bellows: For since the true Cure of the Ulcer is the drying of it, I have observed, it is easilier procured by Powders than by moister Medicines.

Idem.

IV. We may observe from Hippocrates lib. de Affectionibus, that this Disease can ill endure hunger, it may be because where there is meat, the Guts are less raked. Yet this must be rightly understood so as that crudities and mucosities may not be increased by too much meat.

Fortis.

V. If the Patient overcome all the Symptomes of a Dysentery, and the Disease be protracted a long time, at length all the Guts seem to be affected in their order downwards, till the Disease be thrust down into the *intestinum rectum*, and end in a *Tenefmus*: Upon which, far otherwise than in the Dysentery, when the Stools cause a most violent pain in the Guts, that is, the Excrements as they come down, grate upon the tender Guts, at this time the mucous stools are only troublesome to the lower Guts, namely the *rectum*, for then the matter is only made in it, and voided from it. And if so, then in my opinion it will be to no purpose to endeavour a cure by abstersive, glutinating and astringent Clysters, according to the different times of the Ulcer, as is supposed; or by Fomentation, Infusion,

session, Fumes and Suppositories, which respect the same end. For it is evident, this proceeds not from an Ulcer in the *intestinum rectum*, but rather because the Guts, as they recover strength by degrees, by the same degrees they thrust down the reliques of the Morbifick matter into the *rectum*; which being incessantly irritated every day, scrapes off that mucous matter, with which, by Nature's providence, the Guts are lined. Therefore the part affected should be strengthened, to the end it may, after the manner of the other Guts utterly discharge the reliques of the Illness, which now are upon yielding. And this can be done only by such things, as are apt to give strength to the Body: For a Topical Medicine, whatever it is, applied to the grieved part, because it is a thing aliene, will weaken more by its troublesome Touch than it can strengthen. The Sick therefore must have patience, till by a restorative diet, and some Cordial Liquor he can gain strength, as which returns, this Symptom of a *Tenesmus* Will at the same pace go away of it self.

Sydenham.

Medicines especially made use of by eminent Physicians.

1. This is my most approved Remedy for a *Tenesmus*; It is a drachm or two of Syrup of Buck-thorn in Cinnamon water. The Patient is certainly cured in one day; now the Body is purged without trouble, and when the serous Humours are voided, the Patient is perfectly cured with this Remedy alone.

Baricellus.

2. Some take Cera's, and Litharge well steeped in water; and mix them well with the yolk of an Egg and Rosewater in a Mortar, and apply it with good success.

Alex. Benedictus.

3. This Fume cures the *Tenesmus* to a miracle; Take of Mastich 1 drachm, Frankincense 1 scruple, Myrtle Seed 1 drachm and an half, red Rose flowers 2 drachms. Make a powder for a Fume.

Forestus.

4. This is an admirable Clyster; Mutton broth with about a drachm of Oyl of Wax dropt into it. A few drops of oyl of Mastich given inwardly in Plantain water cures a *Tenesmus* presently.

Hartmannus.

5. Take an old Brick, black with Smoke, break and powder it, put it into white Wine Vinegar, wrap it in a Cloth and apply it.

6. You will find admirable efficacy in these Pills in a *Tenesmus* with a quotidian Ague; Take of Parfly, Anise each 3 drachms and an half, Seed of white Henbane 2 drachms, of Parfly 2 drachms. Pound them together, and make Pills of them with Wine. The Dose 5 grains with Rob of Myrtle and water.

Guilh. Varignana.

7. To take away the pain of a *Tenesmus*; Fill two Bags full of powder of Brimstone, Boil them in Vinegar and let the Patient sit first upon one, then on another, as hot as he can endure; it presently takes away the pain. It is experienced.

Villanovatus.

Tonsillarum Affectus, or Diseases of the Tonsils, or Almonds of the Ears.

The Contents.

The Swelling of them cured by Scarification. I.

When they are inflamed, gargarisms must be warm. II.

Whether the cutting them off, when hard, be safe? III.

Their Porous Coat, when they are swelled, shows like an Ulcer. IV.

Upon the abuse of repelling Gargarisms, the Swelling grew into a stony hardness. V.

Whether, when they are inflamed, Repellents may be applied outwardly? VI.

Medicines.

I. A Certain Knight had his Tonsils swelled from I know not what defluxion: which had been so swelled for 2 years, that the swelling could not be got away by internal or external Medicines, no not by Issues. But they were immediately got away, when I had once scarified them.

Sericus.

II. When the Tonsils are inflamed, we must observe with *Arius* and *Paulus*, that Gargarisms must be given rather warm than cold, or very hot, for any thing actually cold is bad for an Inflammation and inflamed parts: And if they first washed their Mouth with warm water, it would be better, according to *Avicenna*, for so the Gargarisms would sooner penetrate.

Epiphanius, Ferdinandus.

III. I have often admired with my self the boldness of the Ancient Physicians, who, when the Tonsils were hardened after Inflammation, took hold of them with an hook, and cut them off with a Knife, as *Celsus* l. 7. c. 12. testifies. For thus I thought with my self, sure it is not safe to cut off these parts, which are of great necessity in the Body, and all over interwoven with Nerves and branches of the Carotid Artery. And which is more, I find *Aquapendent* at the same stand with me. But *M. A. Severinus Pyrotech.* l. 2. c. 64. has given light to this doubt, who writes thus. The Tonsils usually grow out with four eminences, being bred of a viscous and tough Humour, either from the French Pox, or some Rheum, as *Mariscæ* (or Piles) do. Although I have not yet seen this case, yet for the sake of the younger I thought good to note, that the Tongue must be held down, the Tonsils taken hold on with an Hook, and then cut off with a knife crooked backwards, and sometimes they must be seared with a hot Iron.

J. Van Hottel.

IV. Inspection of the Tonsils finds an Ulcer: In which notwithstanding we must observe, as *Fallopian* advises, that the Tonsils contrary to the nature of other Glands, have a Nervous Coat, pervious with many and large Holes, which, while they are Swelled, gaping wider, easily impose on the ignorant, who take them for little Ulcers; but as soon as the swollen Glands fall, these Ulcers disappear.

Joubertus.

V. One could scarce either breath or swallow because of the swelling of his Tonsils: after he had long used drying and repelling Gargarisms; the thinner part of the Humour being dried up, the rest grew into a Stone. And when the Muscles of his *Larynx* grew every day stiffer than other, and his breathing more difficult, he called me, I ordered him to wash his Mouth with a Decoction of Marsh-mallows, Figs and Mallows: and after washing his Mouth I prescribed him to lick clarified Honey, fresh Butter, and powder of Florentine Orrice mixt together, wherewith the Tumour being softened, he voided a Stone, then he could breath freely, and when the Ulcer was cured, he recovered.

Jessenius, Jessen, opud Schenck Jurtij.

VI. Almost all Practitioners, when the Tonsils are inflamed, apply repellents inwardly, yet *Rondeletius* dissents from them, and the common custome, who *lib. 2. cap. 4.* will not only have astringents applied inwardly, and mollifiers outwardly, but astringents both inwardly and outwardly: For when the Parts are lax, he thinks they must not be made more lax, while the matter is in fluxion, but only when the fluxion is stopt, that the matter may be drawn outwards: But in the beginning he applies astringents outwardly to the sides of the Artery under the nether Jaw, which, he writes, he tried in himself, and hindered a Quinsy and a defluxion to the Throat, and cured many, as they were beginning with the Kings-Evil. But here great caution must be used, and we must see what store of affluent matter there is, for if the Body be as yet full, and the afflux great, I would persuade no man

to apply repellents outwardly, since it may easily happen that the Matter being repelled inward, may raise a dangerous Quinsy; and the Matter may always with greater safety be carried outwardly than inwardly.

Boerhaave.

Medicines especially made use of by eminent Physicians.

1. When one was ill of a small Inflammation of his Tonfils without a Fever, I Cured him with this one Gargarism; Take of Plantain water 1 pound and an half, red rose Flower 1 pugil, Quince Seeds 1 drachm. Boyl them a little and strain them. Add of diamoron 2 drachms, dianicum half a drachm, Mix them. Make a Gargarism. ¶ In malignant and crusty Ulcers, when the Body is purged, Ashes of Swallows mixt with Honey is very good, and I have often used a Plaster of Swallows nests with good success.
2. A Decoction of Vervain easily cures the Ulcers of the Tonfils.
3. According to Boerhaave, terra sigillata if applied, or a little of it swallowed by degrees in Broth is very good for an Inflammation of the Tonfils.
4. This is an approved Liniment in malignant Ulcers of the Tonfils, if the ashes of lesser Centaury and powder of Album Græcum be mixt up with Honey to a consistency.
5. We take a Viper's Head and hang it about the Neck in a Scarlet thread, so as that it may touch the Patient's Flesh, and we have found it do wonderful good.

Forelius.

Crulinius.

Hofmannus.

Sennertus.

Christ. & Ve-
ga.

Tremor, or shaking.

(See Paralysis Book XIV.)

Tumores præternaturales, or Preternatural Tumors.

(See Abscessus Book I. and Inflammatio Book IX.)

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Medicines.

I. I Saw an imperfect crisis in M. N. who had been Sick for a Month of a grievous continual Tertian, he was at length taken with a painful Swelling from his left Foot to his Knee. He in the absence of his Physician, did at the very first apply a repelling Oyntment, and a Cataplasim of the Linseed that remained after the Oyl was drawn, by which means he disturbed Nature in her expulsion, so that the peccant Humor being afterwards very much impacted, could scarce be dispersed with several Medicines in 6 Months time.

Gr. Hortius.

II. Here their Error is confuted, who when the strength is good, do apply to cholerick Tumors suppurators of Milk, Flower and the like, whereby the Pores are stoppt, and sharp Vapors are kept in, and when they are pent up, become so fierce, that they begin either to erode the Part hurt, or destroy it, and breed a Gangrene.

Sanctorius.

III. Varandæus used with success our Emplastrum Vesicatorium, which is made in the shops, alone and unmixt with any thing else, and he cured a great and contumacious Tumor in the Knee, when other Physicians had used Purging, and a sweating Diet and many Applications to no purpose. Sennertus uses the same, but mixt with Anodynes in a long and contumacious Pain, especially if it arise from cold Matter.

Riverius.

IV. The Feet and Legs sometimes swell with an oedematous Tumor. I think the cause of this Disease must be ascribed to the strength of the expulsive faculty in the Bowels and habit of the whole Body, which thrusts down the redundant, pituitous and ferous Excrements, which tend downwards of themselves, to the Legs and Feet, as to the lower and weaker Parts. For I know by Reason and daily Experience, the Feet and Legs sometimes swell, when the Liver ails nothing, for the said reason: Besides, by simple congestion, without any fluxion, both the Feet, and Legs, and other Parts, may rise in divers Swellings, especially cold ones. In such swellings of the Legs, that have been much and long swelled, Incisions and Scarifications, Sinapisms and Vesicatories are much suspected; seeing the Heat can never be strong in Legs so affected; and when a great Incision is made, it exhales the faster, together with the loss of Water and

and Spirits. Moreover with this extraneous humidity, a notable driness is caused for want of nourishment. The pain of the inflamed Wounds, the effect of solution of unity and increase of driness causes Inflammation, and this a Gangrene, which is followed by a *Sphacelus*, while the weak Heat perishes.

Zacchius.

V. Tumors are gatherings, which only swell without Suppuration; but Abscesses are suppurated Tumors, or Suppurations. In Tumors, except they incline to a Gangrene, the Physicians of our time are not accustomed to use the Instrument and Knife: for these timorous People do not dream of taking away Blood, because, what a madness were it to put a Man to Pain, or to increase the Inflammation and mischief? Yet notwithstanding, being both so taught by the Ancients, and confirmed by our experience in Practice, have made bold to cup and scarify several, and upon the Tumors very much. We rely upon the Authority of our Dictator *lib de Ulcer.* But if not, saith he, we must pierce the Tumors with more deep and frequent Wounds, than in other Cases; and this must be done with very sharp and small Instruments. And *lib. 7. Epid. We must pierce Ribes, &c.*

Severinus.

VI. Such Oedomatous Tumors, if they be not discussed with Medicines, require the last Remedy, proposed by *Ben. Faventinus*, To cauterize such Members with an actual Cautey in several Places: for not only the watriness will be drawn out by it, but the exonerated Members will be strengthened so as to be able to concoct their nutriment, and expell what is superfluous.

Forestus.

VII. Topicks in the beginning of an *Oedema* must moderately repell: for seeing the Humor that causes an *Oedema*, is usually thick, it would be too much settled there by strong repellents, for it would not easily go back, although the *Serum* of the Blood be mixt with it usually, as its vehicle. But here we speak of a true *Oedema*, bred of supervacaneous natural Phlegm (not of one that is caused by a pituitous and cruder sort of Blood) in which we use Repellents in the beginning, rather to strengthen the Part than repell the Humor, with which also we mix discutients; as when in strong Bodies we apply Oxycrate of 2 Parts Vinegar and 1 Water, wetting in it either a new Sponge, or one prepared with Nitre or some sort of Salt: for Vinegar not only repells by its coldness, but by its driness, incides, attenuates, and dissolves; also a new Sponge, or one prepared, dissolves.

Chalmetuz.

VIII. A Child was born with a great swelling upon its Loins, which when it was opened, much Water run out, and the Life with it; and when this was gone, we saw the ragged *Vertebrae* and Nerves of the Spine dispersed through the swelling. Let Surgeons take notice of this danger, which has been observed in the Loins, as also to avoid the same in that soft Tumor which arises sometimes upon the dilated sutures of the Skull, into which when a Knife is directed, it may easily hurt the Brain, lying that way. In so dubious a tumor have recourse rather to discutient Plasters than to the opening of it.

Talpizus l. 3. c. 29.

IX. In hardened Parts, we must consider whether they have only some of the 3 sorts of hardness, or whether they have some sharp thin and corroding, Ichorous defluxion mixt withal, upon which account the Schirrous hardness degenerates into an Ulcer. For this purpose indeed such things serve as do soften, but with Minerals mixt with them, or Oyl of Mandrakes, by reason whereof sharp humidities are qualified, and dried up by degrees and slowly. In which also we must have a care of such things as soften very much, or of Medicines of thin Parts, for they by their heat and tenuity do easily enrage the Ichorous matter, and make it degenerate into an Ulcer, which afterwards has not been known to give way to any Remedies.

Mercatus.

X. Asses Milk is good to soften any hard swelling, which is so far from obstructing, that by *Ætius* it is rather accounted a most present Remedy to dry up Obstructions, and by *Avicenna* and all that are skilled in the Art. For it has not much caseous or butyrous substance in it, but by that little fatty and unctuous substance it sticks, by the Serous it penetrates, and so by softning it overcomes dry and pertinacious Obstructions.

Foris.

XI. If the *Scirrhus* have its rise from a melancholick Humor, it must be more cautiously treated, then if from Phlegm, lest it turn to a Canker: and especially if it incline to Suppuration. Have a care, it be not irritated with hot Medicines.

Sennertus.

XII. A long time is required to the breeding of a *Scirrhus*, therefore if the Disease (with hardness) be new, it scarce deserves to be reckoned among schirrous Tumors. I often meet with round Tumors, hard to the Touch, and without Pain, in which I find nothing besides Water, which is contained in a very hard Membrane. I cut one of these Tumors this Month out of the Belly of a Girl of 9 years old, who recovered. Tumors also arise from pituitous Humors, which nevertheless are hard to the Touch. I lately cured a Tumor in a Matron's left Wrist which came from a Contusion, which was so hard, that it was reckoned by all an exquisite *Scirrhus*: When the Tumor was opened, I took out of it an Humor like the Fat of Bacon, which exposed 24 hours to the Air turned into little Stones. Afterwards took out a very hard Membrane. And in such Tumors the Membrane is extended by the Humor, just like a blown Bladder, which is hard to the touch, though there be nothing in it but Wind.

Fab Hildanus.

XIII. A Matron about 40 years old, had a violent Pain in her left Side, with a lingering Fever, and extenuation of her whole Body. I felt it, and laid open a suppurated Tumor with a large Incision cross-ways, out of which I took two Bladders of very unequal and fetid Pus; when this was evacuated, I found the ends of three Ribs very carious, about 3 Inches whereof I was forced to eat away by applying an actual Cautey to the ends of them. Provident Nature had guarded the *Pleura* with much flesh under the *Caries*. The Matron was recovered with a restorative Diet and Milk. ¶ M. N. was troubled with a scirrhus Tumor for a long time in his left side, above the 5th and 6th true Ribs, upon the 6th the Swelling was opened with an actual Cautey, out of which a little Pus ran, a grievous Pain remaining. I observed the Ulcer was as broad as my Hand and the Ribs underneath it were foul, more than half through. Univerfals premised, I cut 4 Inches off the ends of the Ribs, having applied an actual Cautey behind their ends: At length I procured exfoliation of the burnt Parts by catagmatick Powders, and I cicatrized the Ulcer with absterfve and incarnating Medicines.

Gualt. l. 3. mar. Obs. 3.

XIV. Because a *Meliceris*, one sort of coated Abscess, requires a cure by discutients, and an *Atberoma*, another sort, by Septicks, I will speak of the choice of them. As to a *Meliceris*, the cure by Medicines is found in Practice to be difficult and deceitful. Nevertheless because the due cure of a Tumor in the beginning is alwayes desirable, and proposed by most Authors, we must consult first the descriptions proposed by *Galen. 6. K. T. cap. 14.* and then *Ætius* and *Paulus. l. 4. c. 34. Langius l. 3. Epij. and Eponymus Philiatrus.* As to the Chirurgical part *Celsus* has committed it to Writing *l. 7. c. 6.* But here I will add some useful Ways and Observations. First of all, such coated Abscesses as, when they are handled, are moveable every way under the Skin, then we may undertake to cure with confidence: But into others, which stick fast, red hot Irons may safely be run into them, when they are

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are opened, and the matter that fills them, got out; which is the fittest to be done, when there are signs, that all the Strings by which the Abscess sticks, are not plucked up, and there is danger either that the Blood will run out or Corruption breed. And the Cauteries requisite for cutting must be sharper than ordinary. *Agnapendent* requires a *Smilion*, or recurve Penknife. After this, having all things in order which are requisite and of use, have a Sponge at hand, with which the troublesome Blood may be wiped away as it runs out in cutting, and you must exactly mark with Ink the Site, Magnitude, and Figure of the necessary Dissection: which Section must be extended, as far as the Tumor reaches, or a little within it: for so the Fibres may more commodiously be drawn out, and the Coat taken hold of, and the Belly of it cleansed; then you must slant your Knife and endeavour dissection with an oblique Hand, and so slay off the Skin that you wound not the Bladder. When incision is made, *Cornelius* advises to part the Coat with the handle of the Knife from the Skin and Flesh, and to cast it away with what is in it. But nevertheless I find, that they stick firmer, than to be parted by any blunt thing, wherefore it must be cut with the edge of the Knife run under the Coat, and must all be taken out; or, if the Patient will not suffer this, it must be eaten with caustick Medicines, which often puts the Physician to a great deal of trouble.

Severius.

XV. A *Meliceris*, which rises a little above the Wrist, does often so impose on them that have never seen the Matter, that the Physicians believe it to be a Scirrhus swelling or a *Ganglium*, and so are afraid to cut it. But nevertheless we must know, that this hardness comes from a distension of some copious Humor, like the white of an Egg, or rather like white Honey. You must not therefore handle this every way moveable Tumor too confidently, if you will hear me, you must open it with a Lancet, or a prick of the Sea Parsnep, which the timorous are less afraid of. This observation was made good in myself: for I cut one of these that grew on my *Metacarpus*. One had a Swelling began to rise in his left Hand, which although some took for a sort of *Ganglium*, yet when I prickt it, a pellucid Phlegm that came out showed it to be a *Meliceris*. A *Meliceris*, that grows above the Wrist has no Bladder about it, as far I could observe in several, wherefore you need make no large Section for it; nor when it is cut need you be solicitous to get out any Bladder, which Cure some through mistake have insisted on.

Idem.

XVI. When you have cut out a *Steatoma*, remember to take care of some Intemperature, especially if it be a large one, left in the Part. And it must be the Care of him that cures, to cherish the same with Medicines amicable to Nature. And when you find some Fibres remaining behind, it is the best way to apply a Caustick or a little Fire to it. And this indeed is the Cure, if the *Steatoma* have a broad base, for if it hang by one little foot-stalk, it is sufficient to cut it out by the Root. *Fallopis* is content with Corrosives. And we must not neglect that of *Ætius*, which is observed in the Kings-Evil, if the *Steatoma* be fastned above, it must be cut round with a Pen-knife, and parted underneath with the Fingers; if it be inserted in the Ambit, it must be cut underneath.

Idem.

XVII. But in all kinds of *Atheromata* this among other things must especially be taken notice of, which has been observed only by me, as I often handle them, that when the Coat of the Abscess is amply laid open, it must not always be all parted from the Skin, intire with the Stuff inclosed in it, for the pulling of it out would be painful, and scarce tolerable by all People. It is sufficient to lay open the Skin a good way, especially cross-wise, and to cut as much of the Membrane away as you

can with a pair of Scissers or a Knife: But then you must take away some of it with Medicines, I do not say Causticks, but Digestives and Eroders. I first found this in a young Man, who had had an *Atheroma* upon the *cartilago ensiformis* for above six Months, in which no cutting away was made, but the Bladder when it was opened wide, rotted, and was got out partly by Absterives, partly by Cathereticks. But then the Bladder must not be thick and cartilagineous. Therefore he must be a prudent and an experienced Physician, who can perspicaciously distinguish in all. There was another thing I observed in this Young Man, that this Tubercle cut out about his Breast, caused some distention in the Muscles of the Breast; Wherefore you must be careful to make lax the Muscles continually, by applying Medicines to them and to the Armpits and Groin. Another thing must be observed from *Ætius*, that when the Pellicle is taken away, if the Lips be over lax, the redundant Skin must be cut off, and then the Lips must be sowed together. And this moreover is worth notice from the same, that if such a Swelling be in the Head, we must, after the Pellicle is taken away, cut the Bone about it, and carefully scrape the Skull.

Idem.

XVIII. Whether, when the Bladder is taken exactly out, a Suture should be made, since a bleeding Wound requires conglutination, The determination is not so easie: for if you look upon the greatness, and would have a Suture in regard of it, the small gaping of the Wound is content only with conglutinating Things. If the Sinus be great, as much indeed as the largeness of the Wound requires the help of conglutination, so much also of difficulty and an Ambiguity it creates, lest some hole should be left under the old habit of the Skin, and a false Abscess grow from the former substrate Matter, and so the coalition be in vain. Therefore it is requisite to cut away the proud Flesh and the Skin first, and then sow it. But often when Men are thus treated they will not, being tired out with Pain, allow this; but Suture might be used, would they allow it. *Ætius* has left it to our choice whether we will sow or no, who says, When the Operation is finished, the Lips may be sowed, that they may the better be glutinated, or Liniments may be put deep in, and the Cure may be used for generation of Pus.

Idem.

XIX. The true generation of a *Sarcoma* in my Opinion is this, the Mouths of the Arteries that serve for nutrition of the Muscles are sometimes opener than they should be, either by some fall or blow, or by some internal Cause, especially in plethorick Bodies and in Parts unduly moved. The innate Heat converts the extravasated Blood into Flesh, and when the Part also stands not in need of so much nutriment, hence it is, that it grows to a preternatural bigness; here, if the Blood be impure, Bile produces pain, phlegm viscosity, melancholy a cartilaginous Hardness, and it is by reason of these Humors, that this preternatural Flesh is Yellow, White or Livid. It is seldom enclosed in a Coat of its own, unless it consist for the most part of Phlegm, and such a Tumor comes most in the Neck. The Veins also encrease according to the encrease of the Tumor, so that they may be felt under the Skin as thick as ones Thumb. It is not malignant in it self, but sometimes a bad Cure makes it so: Here the Air does a great deal of harm, when the Swelling is exposed to it. It commonly refuses the best Medicines, and in spite of them the Swelling increases more and more: And you will rarely Cure it, except you take it away with a Thread or a Knife, or with both. In the beginning the Cure must be tried with strong Astringent and repellent Medicines: gentle bindings are also used, after the application of a Plate of Lead, or *Empl. Diabalsitens, de ranis cum Mercu-*

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rio, or the following; Take of rinde of Pomēgrate, root of Bistort each 1 drachm, dross of Iron, Quick-silver, burnt Lead each 2 drachms, Bole Armenick, Bloodstone each 1 drachm and an half, Turpentine and Wax what is sufficient. Mix them, make a Plaster according to Art. In the mean time Purging, Bleeding, Scarification, applying of Leeches must not be neglected in their places; Sweating also, Watching and Fasting are very good. But if the Swelling refuse all these Medicines, and grow bigger every day, Suppurators may be applied. If these Medicines for several dayes do no good, and the Swelling continue in the same state, an actual Cautey must be applied: And let not the perverse Censures of false Surgeons, and of them that are by, disturb us, for by the use of it for a long time the increase of the Swelling will be stoppt, yea and at last it will wholly be rooted out. But if contrary to expectation the Flesh begin to bud out anew, the Surgeon must not delay to attempt the perfect extirpation of it with a Thread or a Knife. Here let a Thread that is smaller and stronger be taken, let this be tied twice about the Neck of the Swelling, and having made a double knot, let the straining of it be repeated the same day, yea, and the dayes following, until it be deprived of its Heat, Feeling, and Life, which will require 7 or 8 dayes time; then take it off with a crooked Knife, which may easily be done, since neither great Pain nor Hæmorrhagy need be feared. The use of a Thread dipt in Mercury or Arsenick-water hastens the mortification of this Tumor; but here a phlegmatick Body is required, for in others the Pain and Inflammation, so afflict the Patient, that it is rare but within a short time this Thread must be taken off. Yet the Surgeon may, for mitigation of the Symptoms and cooling, anoint that Part, which the Thread touches, with *unguentum album Camphoratum*, Ointment of Roses and the like by the help of a Feather. If you have a mind to use the Knife only, you must use your utmost endeavor to take all the Tumor away; otherwise you must abstain from the operation, unless you have very great hopes of consuming the remainder by Medicines. In the mean time let the Surgeon have a care, that he cut not the greater Vessels, and to stop the Bleeding.

XX. M. R. complained of a troublesome *Meliceris* in his right Shoulder, which, having first prepared and purged his Body, I dissolved by applying *ceratum Diaphanum* described by *Aquapendent cap. de Meliceris*, and thus corrected by *Spigelius*; Take of Sal Gemm, litharge of Gold, Cerus each 4 ounces, Wax and Turpentine each 2 drachms, *Galbanum*, *Opoponax* each half an ounce, Mustard powdered 2 ounces, old Oyl 4 ounces, strong Vinegar what is sufficient, make a soft Cerecloth according to Art. A Woman also tried the peculiar efficacy of this Cerecloth against a *Meliceris*, which grew in her right Knee, as big as a Goose Egg; she applied this same Cerecloth, which perfectly dispersed the Swelling in a Month's time, and whatever was drawn thither the first dayes, through neglect of Universals.

XXI. The Son of N. had a great *Lupia* (or hard Swelling) as big as a large Fist upon the *Spina dorsii* under the Shoulder blade, which was cured by this method. I ordered an Instrument to be made of Ash or Oak or some closer Wood, like that where-withall Painters grind their Colours on a Marble; and with this I rubbed and chafed the *Lupia* twice a day, half an hour at a time, then I applied an E-mollient and Suppurating Cataplain very hot, and I continued it for 4 or 5 dayes, the *Lupia* suppurated, and when it was open, liquid Pus ran out, and afterwards when the whole matter contained in the *Lupia* was turned into Pus, it was evacuated, and the Ulcer cicatrized. The bag of the *Lupia*

was broken with rubbing with the foresaid wooden Instrument, and the matter contained in it attenuated and divided into Parts, so that it might more easily be concocted. Instead of a Cataplain, a hot Loaf new drawn, cut into halves, may be applied to good purpose.

XXII. Sometimes a Melligineous matter, as in a *Meliceris*, or a Pultaceous, as in an *Atheroma*, is contained within the Bladder. When any such thing comes to be cured, the Skin must be lifted up, and cut either length wayes or cross-wayes (that is, when there is a great Tumor in some place not very obvious to the Eye) and it must afterwards be every way separated, with a broad Probe, or the handle of the Penknife or with the fore-finger, till the whole Bladder appear, which must then be cut off by the root, the Vessels being first tied fast, that feed the Tumor. And we must take notice, that the Surgeon should be very circumspect in this Operation; for if the Bladder happen to be broke, not only the contained matter runs out, but, also certainly causes a Relapse, unless it be consumed by Catharticks. Yet oftentimes the Tumor lies in so strait a place, and the Pellicle is so thin, that it bursts upon the least touch. In this case it is *Aquapendent's* Counsel, that we endeavour to separate the new Bladder with broader Instruments, before it knit it self firmly to the Skin again, for then we must have recourse to Medicines.

XXIII. Many *Natte* arise in the fleshy Parts, and stick moveable and soft to the Skin. I have not observed them to subtract the aliment from the Parts, especially those that grow in the Head; Nor always to putrefy, but to stick as long to the Parts, as Life lasts. My Grandfather on my Mother's side carried a globous, naked, soft and moveable *Natta* above 60 years on his Head behind. He would once have it opened, Pus ran out. It returned a little after, and after that time he left it untouched. *Greg. Horsius*, l. 4. p. 2. Obs. 14. observed a *Natta* successfully taken out by the root below the nape of the Neck, but the Man's Sight grew sensibly duller, and every day worse than other, till he had also almost quite lost his Sight. If *Natte*, when they are breaking out, be gently pincht with the Teeth they wither and go away by degrees. Which I observed twice at Padua, once in a Noble Woman, whose *Natta*, as it was coming out, a Neighbouring Woman pinched with her Teeth: Some tie it with a Thread and intercept the afflux of nutriment.

XXIV. If a *Tessudo* be with the corruption of the Skull, *Guido* thinks we must use a palliative Cure, But if the corruption be not great, the Disease must be cured as a fracture of the Skull, namely by Incision, and Deterision with Honey of Roses, Turpentine, powder of Orrice, Myrrhe and Frankincense, the putrid Flesh must be consumed with *Aegyptiacum* or powder of Mercury, and the rest must be done, as in the Cure of Ulcers. If the Corruption of the Bone be great, you must use the Prognostick, except you will use a palliative Cure. I think the same must be done in the Corruption of the Skull by the Venereal Disease: For where the Corruption is great, the Patient may not be meddled with. And let the Surgeon have a care, when he thinks the Corruption is small, that it be not great, as once it was my case; For when I attempted to take off the perished Skull, which I thought was but little, all the *es bregmaticæ* came out at once, so that a great part of the *crassa meninx*, and the motion of the Brain, might very well be seen: yet the Patient, recovered, but after the Ulcer was cured and cicatrized, the motion of the Brain might then be observed; Nevertheless I would advise no Surgeon, to undertake the Cure of so great Corruption, at his own peril. But if the corrup-

Forcius ad
Riverium
Obs. 23.

J. Van
Horn.

Th. Barthol.
linus, cent.
3. hist. 20.

Barbette
Anat. Pract.
cap. 11.

Sculterus
Obs. 66.

Chalmotæus
Enchir. p.
85.

tion be little, the Bone must be taken out with a Trepan, or scraped, the Ulcer cleaned and the Body fluxed, as in the Pox, yet there must be a less quantity of Quick-silver. For a *Talpa* with the corruption of the Bone must be cured, as the corruption of the Bone in the Pox.

XXV. A Nobleman had a *Ganglion* grew in his right Groin by little and little, as big as a Child's head. Headvised with Physicians and Surgeons, who tell him of the danger of Bleeding, of a *Gangrene*, and *Lameness*. He chose rather to dye than endure it any longer, unfit for Arms or Wedlock. The Lump was cut about in an Oval line from the Groin to the *Scrotum*: then at the Membrane a little of the Tumor was cut off; and by degrees the Skin, which was under the Swelling, was separated towards the root; the Veins and Arteries, as they were laid bare, were tied, for fear of an *Hæmorrhage*. The Lump was pulled out with its Coat, glandulous, white, without any Blood or Flesh within, easily separable from its root. As the Wound was healing, he had a Fever, bitterness in his Mouth, filthy Matter, pain in the other Groin, but he was cured by a Purge.

Hollerius.

XXVI. *Fungi* very often grow from the Membranes of the Brain, yet they grow also in divers other parts of the Body, because of the vast conflux of Humors from the whole Body, and that, through Natures great Providence, as *Hildanus*, cent. 2. Obs. 19. says. For since nothing is a greater Enemy to the Nerves, than the injury of the Air, especially if it be cold, Nature, which is ever intent upon the conservation of the individual, covers the nervous and membranous Parts, when wounded and laid bare, with this sort of Excrecence, lest the Nerves should be hurt by the Air, while the Wound is in curing. And their Cure must be begun by drying, and finished by Erosion or Excision. Drying Medicines in the beginning are safer than Eroding or Septick ones: For these in Wounds of the head hasten death, and in Wounds of the Limbs cause Pain, Inflammations, and other most grievous Symptoms; And seeing out of Nature's great beneficence this Excrecence is produced for the Patient's good, it must not be consumed at the very beginning, till the Nerves and membranous Parts be sufficiently covered with Flesh, that they can no more be hurt by external injuries. When the Pain, Inflammation and other Symptoms are abated, if the fungous Excrecence fall not, it must be depressed by Dryers; of which rank are root of round Birthwort, Florentine Orrice, Angelica, leaves of Savine, Rosemary, &c. When these things have been applied for some dayes, if the *Fungus* abate not, but grow up in the Flesh, it must be cured by eating things, as burnt Allum, burnt Vitriol, Mercury precipitate, strewing on the Powder, and then applying a Cataplasim: Or a Ligature may be made, and it may be cut off either with a corrosive Thread, or with a Knife: Which when done, the Powders of the said drying things may be strewed on.

Hofmannus,

XXVII. One had for some Months a Swelling rising upon the right side of his Forehead, with a broad basis, as big as a Hazle-Nut, of the same colour with the Skin, soft, and as it were puffed up; it grew of it self, when it was pressed with the Finger, it gave way, and suddenly rose into the same shape again, without Pain, yet it was not observed to be moveable this way or the other, nor did it increase. And because I thought it was one of those Tumors, which are more easily extirpated with the Knife, than dissolved by Medicines, I order the Skin to be cut obliquely with a sharp Penknife: As soon as it was done, no Blood but a very little limpid Humor, like the vitreous one of the Eye, ran out: It fell upon the Patients

right hand, and he affirmed it was very hot. *Præcipitate* was immediately put into the Wound, and other things put after, to hinder Inflammation, and when it was opened the next day, the Bladder was taken out, and the Wound was within a few dayes so dextrously healed, that there was not the least sign of a Scar left behind. Thus we may easily prevent things in the beginning, which, if neglected till they grow old, will scarce give way at all to any Remedies: And no question, but this Tumor, if it had been let alone, would have turn'd at length into a *Meliceris* or *Steatoma*, when the *Mucus* had grown thick by delay.

J. Rhodius,
Cent. 1. Obs.
29.

XXVIII. If there be a swelling in the Cheek, let the Physician have a care that it break not, for so that Seat of Beauty might be deformed by a Scar; However, because oftentimes dissipaters ripen, and ripeners dissipate, by reason of their likeness in qualities, it may so happen that Suppuration may come contrary to the intention of the Physician. When therefore it is made, let him draw the peccant Matter by proper Medicines to the inside of the Mouth, or to the commisure of the Jaws, which is by the Chin. For Women will sooner endure their Lips to be cut, than to have a Scar in their Cheeks.

Hofmannus.

XXIX. *Dioscorides* writes, that the swelling of the Paps is abated by applying Hemlock, which experience testifies to be true: Although *Dodoneus* disapproves of such a Remedy, because of the malignant and poysonous nature of this Herb, which being applied to the Paps may hurt the Heart.

Riolanus.

XXX. *Steatomata* and several Abscesses are often bred in the *Omentum*, because great store of Fat and Glands is found here. So the Mesentery both of it self, and because of plenty of Glands is very subject to Inflammation, Tumors and Corruption. Because these Diseases are difficultly distinguished one from another, they require an experienced Physician. We may say the same of the *Pancreas* and Spleen. In the meantime I shall communicate this Plaster, the efficacy whereof in curing the Tumors of the said Part I have often experienced, Take of Gum *Carranna*, Ammoniac each 1 drachm, Mercury killed with Turpentine half an ounce. Mix them. Make a Plaster.

Barbette.

XXXI. We must proceed gently and gradually in cutting or pulling out axillary Tumors, for while we draw and separate the Tumor with Pincers or any other way, the Muscles that serve for respiration are contracted also, hence an interception of Breathing. As soon as ever this is observed, we must desist a little from the Operation, till they have gathered strength: also Cold and very repercutive things must by no means be applied to these Parts, lest the Matter be repelled to the *Pleura* or other Parts, and there cause Inflammations.

Fabr. Hildanus.

XXXII. An Infant about eight Months old was ill of a Swelling in his Groin, which when I was intreated by the Parents to bring to a Suppuration, after divers sorts of Medicines had been tried before, I observed that one Stone lay in the Groin, by the same token that the other was alone in the Cod on the other side; and therefore I advised them afterward to abstain from all Medicines, for it was not a Tumor but a stone; which afterwards in 7 or 8 Months time slipped down into the Cod; and so there was no need of cutting it, which a Barber was going to do.

Marchetti
Obs. 58.

XXXIII. Swellings in the Knee are very dangerous and difficult to cure, for want of Muscles, and great store of Ligaments; Tendons and Bones being Parts that are of a cold and dry Nature, and unable sufficiently to disperse Humidity. Therefore it is necessary to give help as soon as can be by hot means: Yea, if there be any signs of Suppuration, the Abscess must be opened at the very first

first time, left otherwise the Patient might fall into a Lameness, Consumption and at length death it self. A continual owzing of some Humour, which renders the cure very difficult, usually follows opening the Ulcers. *Barbette* highly commends his restorative Powder for this.

XXXIV. In swelling of the Knees, this must be observed, that Scarifications, when there is need of them, must be prudently administered; for all joynts are weak, yet endued with exact sense. Wherefore pain and other accidents follow Scarification.

Chalmetz.

XXXV. A Boy after he had had the Small Pox, had a swelling of pituitous and flatulent matter, about his left Ankle, which seemed to threaten an abscess. But because such Imposthumes about the joynts are difficult and tedious in curing, and sometimes erode the Sinews and very Bones, we agreed among our selves to try all means, whether the enclosed matter could be evacuated by insensible evacuation: We therefore applied a Cataplasim of flower of Beans, Lupins, Darnel, Powder of flowers of Chamomil, Elder, Melilior, Bay berries, Aniseed, Cumineed, boyled in a simple *Lixivium*, adding a little Salt. We applied this Cataplasim 15 or 18 days without success, the matter at length being heated in the part affected, an itching and an *herpes pustulosus* or *miliaris* came on a sudden: Wherefore for a day or two we omitted the use of the Cataplasim, and we anoynted the place affected with *Unguentum album Rosæ*, and we suffered the Boy to rub his Foot as much as he list. And after that a great deal of Humour had run at the Pustles, the swelling about the joynt abated, when the pustles were healed, we applied the Cataplasim again, till new pustles arose, which we dried up as before, and applied the Cataplasim again. These being changed by turns, this rebellious evil was at length successfully cured. I therefore write this, that the Surgeon may not change his Medicine as often, as success does not immediately follow: For frequently in Children and weak People time is required, before Nature can bring the Medicine out of power into act. Therefore we must not give over, but expect Nature's motion.

Hildanus.

XXXVI. A Girl 10 years old was after the Small Pox troubled with hard Swellings about her joynts in her Arms, Hands and Feet, that would scarce come to suppuration. Some were open, others not: out of them that were open a thin *Ichor* ran, rarely any pus. I gave her a Decoction of *China* root and *Sassa parilla* mixt with Splenetick and Hepatick Herbs, yea and purgatives, wherewith I use to cleanse the Blood. I ordered that her Sores should be washed with Lime water, and the Tents should be dipt in the following unguent; Take of *Unguentum Diapompholyges* half an ounce, *Saccharum Saturni* 1 drachm. Mix them. And that they should be then covered with *Emplastrum Gryseum*. For the hard Tumours, that remained, I prescribed *Emplastrum Diaphoreticum Myrsiceti*. So she was perfectly cured.

Winckle, Msc. curios. an. 76. Obs. 100.

XXXVII. A Nobleman fell with his Knee upon the pavement, he felt a pain under the whipl-bone, and a little after a certain callous excrescence. When the Swelling was not lessened with the Medicines that the Surgeons gave him, I quickly cured him with the following Plaster; Take of *Emplastrum diaphoreticum Myrsiceti*, de *Ammoniaco Foresti* each 1 ounce, black distilled Oyl of Tartar 1 drachm. Mix them. I have often discussed hard Tumours, that were not fit for maturation, with the same Plaster.

Idem, an. 76. Obs. 101.

XXXVIII. *Johannes à Ketbam* in his *summula venarum* has observed out of *Avicenna* that Inflammations and pains in the Kidneys, Loyns, Hips and Bladder are wonderfully cured by opening the Veins by the Knee. And I by opening the inner Vein of one

Severinus.

Mans Knee, who had a Phlegmonous Tumour over all his Leg and Calf, gave him present Remedy.

¶ One had been greatly pained with an œdematous Inflammation in his Leg, and had been long troubled with a black Vein that ran obliquely up his Leg, which being opened cured him. And so another was cured, who had been long troubled with relapses of Ulcers in his Legs. This was done by me at *Galen's* perswasion. l. 2. ad *Glaucum* and by *Ben. Victorius* his advice.

Idem.

XXXIX. In all Medical Observation nothing is more excellent, than to know all the disaffected parts about a Tumour. And swelling is so near of kin and consensaneous to every Disease, that a latent mischief is sooner declared by nothing than by this: Either because the part being weak, cannot turn the aliment brought thither into it self, and so the matter remains; or partly because Pain calls the Humours from all parts. Now, when with the Swelling the Veins do sometimes strut with their full tubes, as if they would burst, all about the places that feed the Disease, they do but persuade us to empty them with the prick of a Lancet, as I have often done with very good success, when the Body has been well emptied with universals before. Therefore *Hippocrates l. de Ulc.* scarifies round old Ulcers, and opens the strutting Veins thereabout. Most Authors boldly scarify Contusions, Inflammations and Tumours of all parts. But I say if we slash the Flesh, how much better may this subtraction be made out of the Veins, that swell out in the afflicted part, which is more plentiful, commodious, ready, easie, safe, and with less pain?

Idem.

XL. If the matter be bred in the Liver, Spleen or Womb, and tend upwards, you may make an Issue in the Thigh or Leg, observing alwayes the rectitude, which makes revulsion, that the matter may not infect the upper parts. Wherefore take notice, that if the matter be sent from them parts downwards, and get into either Leg, they do very ill, and are quite out, who make Issues in the upper Parts for revulsion sake from the lower, although they observe the rectitude: for so they retract the Malignant matter, peccant either in quantity or quality to the upper parts, not without great damage to the Patient. Therefore *Aguapendent p. 1. oper. chirurg. c. 95.* did well, who was not afraid to make an Issue above the Knee for a swelled foot, which besides the revulsion it makes, does moreover intercept the matter, and stop its way, that it cannot get downwards. And I, following his Footsteps, have cured several of a Swelling in their Feet, especially about the Ankle, by making an Issue in the Thigh above the Knee, and they are still well. And you must take notice, that in Men I chuse the outside, but in Women always the inside of the Thigh above the Knee, because of the Womb.

Glandorpius.

XLI. Men set little by Corns, but they are to blame, for if an error be committed in the Cure of them, a grievous Disease may easily arise, I knew a Nobleman die of such: Whenever, therefore Men ignorant in their Art do cut a Corn to the quick, and apply a drop or two of Oyl of Vitriol or *Aqua fortis* or some Arsenick to it, most acute pains, Inflammations, Convulsions and other things do follow, yea, and death it self, as in the foresaid Nobleman. But I use this safe Method; First of all, because this Disease proceeds from rubbing and straitness of the Shooes, strait and hard Shooes must be left off. Afterwards prepare a Bath of emollient things, in which soak your Feet for 2 hours, then wipe them and do so for 3 days. So when the Corns are well softened, scrape and cut off with a Razor all that is hard, but by degrees, and only the superficies, not cutting from the superficies to the Center; When the Corn is thus cut to the root,

G g g g

which

which is done without pain, let *Emplastrum de Cicutra* be applied; and so tied on, that it may stick on night and day. At first renew it every 4 dayes, afterwards once a Month: but it must be worn many Months, yea for a year, which it may without trouble.

Hildanot.

Medicines especially made use of by eminent Physicians.

For watry Tumours.

1. A Plaster of Mustard Seed is the best thing can be thought of, for any watry or statulent Tumour. This is it; Take of Mustard Seed, Nettle Seed, Brimstone, round Birthwort, *Spuma maris*, *Bdellium* each 1 drachm, Gum Ammoniac, old Oyl, Wax each 2 drachms, mix them, make a Plaster.

Chalmeræus.

For other Tumours.

1. I have cured an œdematous Tumour arising about the emunctories of the Brain, by applying *Emplastrum calcinatum* Paracelsi; which is made thus; Take of Balsame of Sulphur 1 drachm, white Wax 6 drachms, oyl of St. John's-wort 1 drachm, Mercury precipitate red and washed 1 drachm, *terra mortua* of Colcothar half a drachm. Mix them. Make an Unguent, by use of which all œdemata and scrophulous Tumours are cured: for by the virtue of Balsame of Sulphur, and Oyl of St. John's-wort, they are concocted and ripened, and by vertue of the Mercury and earth of Vitriol they are well cicatrized, as I have often seen by experience.

Joh. Per. Faber.

2. Hops are excellent in allaying outward pains of the parts, which the vulgar are not ignorant of, for in Strains and œdematous Tumors, as also in Bruises, they often apply them boyled in Beer to the part, in form of an Epitheme, with good success.

Simon Pauli.

Tussis, or a Cough.

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Medicines.

I. **A**lthough only empirical Remedies are wont to be used for a new Cough, and there is not a man among the common sort, but is furnished with many and divers Remedies of this nature, which many without the advice of a Physician take confidently and inmethodically, and give them so to others; yet persons that are of a tender constitution, or hereditarily inclined to a Consumption, or formerly have been in danger from a Cough, should upon the first approach of it have a care, and immediately betake themselves to the Rules of Physick. According to which, that the Method of cure may rightly be insisted on, the therapeutick Indications will be especially these three, First, to appease or remove the disorders of the Blood, from which the defluxions of the Serum proceed. Secondly, to derive the recrements and all the refuse of the Blood, that are apt to separate from it, from the Lungs to the Pores of the Skin, or the Urinary passages, or to other Emunctories. Thirdly, to strengthen the Lungs against the susception of the Serum and other Humours, and also to guard them against meeting with the external Cold, whereby they are usually most hurt. The first Indication respects both the effervescency of the Blood, when by reason of *effluvia* kept in, it æstuates and boyls up in the Vessels; and the dissolution of it, that is, when being dissolved in its frame, it too much lets go its hold of the Serum and other Humours: For taking away both these, a thin course of Diet must be kept, and the injury of the external air being carefully avoided, a little more plentiful transpiration must be procured, or at least the usual restored: Yet, if the Cough grow worse, Bleeding, if the strength and constitution will bear it, is often used with Benefit: which when over, Hypnoticks almost always do good, inasmuch, to wit, as they retard the motion of the Heart, and by consequence the too precipitate course of the Blood; moreover, they bring it to pass, that this traverses the Pneumonick Vessels gently and moderately, without much rejection of Serosities: And pectoral Decoctions also, in as much as they destroy the sharpness of the Humours, and hinder the Dissolution of the Blood and its fusion into Serosities, must be used: By parity also of reason and manner of working, Medicines made of Sulphur do such remarkable Service against a Cough. The second Indication, to wit, that the Serum and other recrements of the Blood, being derived from the Lungs, may be evacuated by other wayes, is performed by Diaphoreticks, Diureticks and by gentle purgatives, which must be used by turns. Therefore after Bleeding them give and sometimes repeat a purge. Let roots of Chervil, Butchers-broom, Elecampane, and other things that move Sweat and Urine, be put in Pectoral Decoctions; *Millepedes*, volatil Salt of Amber, and some fixt Salts and testaceous powders, made into Pills with Turpentine, are often given with success. The third Indication, that the Lungs and their Passages may be defended from fluxions of Humours and meeting with Cold, which is vulgarly called stopping of a Catarrh, is performed by Licks and other private Remedies, and it respects two things especially, namely, that the mouths of the Vessels and Glands, which open into the Trachea, that they may not discharge too much Serosities into it, may be shut with moderate Astringents, And Secondly, that the sides of the ducts of the Trachea may be sufficiently suppled and smoothed,

smoothed, that they may neither be offended with the pouring of sharp Serum upon them, nor by meeting with the external Air, and so not be continually irritated to Cough, and moreover, that when these Passages are sufficiently lubricated, the spittle which sometimes sticks fast to their sides, may more easily be raised and coughed up. For the former intention it is, that Conserve of red Roses, *Olibanum*, Mastich, *Loboch de pino*, *Syrupus jujubinus*, de *rosis siccis*, and other Astringents are prescribed: For the Second intention, Liquorish, with its various preparations, is counted so famous a Remedy against any Cough what ever.

II. You shall see very few Physicians have recourse to Blood letting in a dry Cough, because they think this either comes from a dry intemperature without matter, for which they will have the Lungs smoothed and moistened with Becchicks; or from thin Phlegm or Serum falling (as they perpetually talk) from the Brain upon the Lungs: and then they will have the matter incrassated, and the impurity of the Body evacuated by Clysters, Purges and Sneezing. Which Remedies though we think them not to be despised, yet we affirm that all these should rather wholly be omitted, than altogether to abstain from letting of Blood, especially if the Disease be stubborn, both to cure the affection that accompanies the Cough, and to hinder more grievous mischiefs, which may follow, as Inflammations, bursting of Veins, Ulcerations. ¶ It is judged that Blood must be let in a dry Cough, if it cause a Fever: If there be a sharp and vitious Humour within the Veins: If the Liver be hot or swelled, and so raise a Cough: If a thin and sharp Humour fall from the Head: If the Stones be affected, and a dry Cough therefore arise; for *Hippocrates* 4. *Epid.* orders such to Bleed in the Foot.

III. In a Cough you must purge gently, by turns and at intervals, and with mild Medicines, or such as have their strength some way abated, lest a greater fluxion be caused by sharp ones. But when the defluxion is cold and thin, you may purge often, without premising any preparation; but if it be thick, you must prepare a long time, and let it be late ere you purge.

IV. Vomits, if not alwayes, yet for the most part, cure a Cough whether new or inveterate, if procured by *Aqua benedicta*: for this way the first region of the Belly is freed from all impurities, and distillations are stopt, so that if convenient Pectorals be used after them inwardly and outwardly, it seldom returns.

V. In a thin Catarrh falling from the Head upon the Breast *Trallianus* lib. 5. cap. 4. commends *Diacodium*, for them, who have a thin defluxion running down from the Head upon the *Aspera arteria*, which will not suffer them to sleep because of the Cough following it. It is also convenient in an afflux of matter by the Vessels out of the whole Body, *Trallianus* his caution being used, that it be given with great care and circumspection, not alone, but with other things: not, when the strength is low, or when there is store of recrements lodged in the Breast and *bronchia*. For though it may seem to stop the Cough, and to cause Sleep, yet it augments the straitness of Breast; so that it chokes many, as sure as the halter; therefore he mixes it with *Ozymel* or Syrup of Horehound. *Helmont* commends *Laudanum Opium Paracelsi*; but he adds, a Vomit followed in the Morning. I find by experience that in the Morning it causes vomiting, and I much value the benefit of this Medicine. The reason why it Vomits is not yet known.

VI. The various pituitous matter, that is voided in Coughing, by old Men especially, and in Winter time, does not alwayes come from the Head: But it arises also from excrements continually ga-

thered in the Lungs: for as the Brain by reason of its store of Vessels, is alwayes full of superfluities, especially if the Blood be impure: so the Lungs also, because they consist of innumerable Vessels, do much abound with Blood. If there be a Caco-chymy of the Body, they continually gather such excrements, and discharge them out of the lesser Vessels into the larger Branches of the *Aspera Arteria*, out of which, together with the excrements, that are brought thither by the defluxion, they are afterwards brought up by Coughing.

VII. Roots of Goats beard are commended for a hot intemperature of Stomach, Liver and Kidneys. *Tabernaemontanus* also commends them, especially with the purple flower for Diseases of the Breast, Cough and difficulty of Breathing. But in my opinion it is a *Succedaneum* to Cichory, but only that, because it is sweeter, it more readily frees the Vessels of the Liver from the stoppage of Humours, whose obstruction the fore-cited Symptoms do attend by Sympathy; which Symptoms Practitioners, who are ignorant of Anatomy, do ascribe to the Breast or Lungs, as if they were affected by Idiopathy. So it is to no purpose, if you should cure Hydropick, Coughing People with sweet things & Becchicks, who want Medicines to purge water, and to free the Liver from stoppage of bad Humours. ¶ The Noble Lord *J. Antonius a Seva* after his return to Geneva out of Flanders had got a Cough from an unusual moist Air and his unaccustomed drinking of Beer, which was followed with a swelling and hardness of Belly. The Physicians had long driven against the Cough and Catarrh, not so much as touching or taking any care of his *Hypochondria*. When he was committed to my care, he took things to open and strengthen his Liver, laying aside Becchicks, which had swelled his inwards: Thus in a Month's time he that was near threescore, was rid of his Cough, which, as the Belly fell and grew soft, by degrees abated.

VIII. A Woman, upon swallowing the kernel of a Hazle nut as she was laughing, fell into a violent Coughing, which troubled her for two Months time with a Fever and emaciation of the whole Body. A Physician who was called, suspected a Consumption: But the judicious *J. D. Sala*, observing that her Fever was not continual, nor her Spittle Bloody or streaked with pus, pronounced her free from a Consumption. After many inquiries, when he knew the cause, after a Vomit of Honey of Roses with common Oyl, to no purpose, he added a lambitive of Oyl of Sweet Almonds, to irritate the expulsive faculty, and enlarge the Passages; at length she spate up the kernel and recovered.

IX. One was ill of a troublesome short Cough, and when no Medicines would do him good, after he had born it a long time, he asked my advice: I gave him every day the juice of Horehound with Honey, and at times to lick Honey of Squills, till a worm came out of his Breast with Coughing, which restored the Man to health.

X. I knew a certain Person who fell into a Cough by reason of a defluxion of a bad and noxious Humour into the Breast, coming from a cold intemperature, and when he made him some Causteries in his Head, he was perfectly free of all his Symptomes, so that the plenitude of the efficient Humours being exhausted, his Cough ceased, and he recovered his health by benefit of his Causteries.

XI. Being moved thereunto with the urgency of the business, we resolved to open an Issue in one of his Arms, whereby without any other help the Cough began to abate.

XII In a troublesome Cough, and a thin defluxion upon the Breast, if what falls, escape the straining of the Lungs, and is not discharged, *Laudanum* is

G g g g 2 the

Will.

Potallus de
Sanguin.
Miff. c. 13.Mercatus.
l. 2. c. 3.

Idem.

Hartmannus.

Rolsnecius.

Platerus.

Simon Pauli.

Bartholinus.

Ant. Benive-
nius.Trallianus.
l. 2. c. 5.

Mercurialis.

Mayerne,
tract. m. f.
de Laudano.

the best Remedy, which incrassates, and by procuring sleep, or rest at least, strengthens Nature, and promotes the concoction of the crude Humour. Upon the experience of *Monsieur de Sigon* and President *Ripant*.

XIII. I was Physician to a certain Student, who had been subject to a Cough from a Child. He seemed to be of a Melancholick constitution and indifferent healthy, but that his Lungs which were originally weak, did suffer upon every running of the Blood into Serosities. In Summer time, while he transpires freely, he lives healthy enough; in Spring and Autumn, when the Blood alters its temper, and either of it self, or upon any the least occasion, suffers serous fluxions, he easily falls into a Cough. Especially when there is a Constipation of the Pores, and errors in his way of living, a cruel, and a pertinacious Cough is raised: In this state his best Remedy, and one that he has often tried with success, is to drink pretty freely of some generous Wine, and very sparingly of any other Liquor, for so the acidity and *fluor* of the Blood being suppressed, and free transpiration procured, he is much relieved, and sometimes recovers in a short time.

Willis:

Most acute

XIV. I advise young Physicians, that in correction of glutinous Phlegm they take great care not to use much Sugar, or Sugared Medicines, seeing thereby Phlegm is not so much amended and dissolved, as it is encreased and made every day more glutinous than other. Wherefore many Physicians have a bad custome in every Cough that is protracted for any time, and threatens a Consumption, (to amend the matter and to maintain it when produced,) to abuse Conserve of red Roses, by devouring a great quantity every day, whereby not only the Ulcer is not cleansed, dried or healed, but moreover a sense of weight, and intolerable Cold arises in the region of the Stomach, with loss of appetite.

Sylvius de le
Boë.

XV. The same must be understood of Emulsions, which are ill used in this case, because they ought not to be used, but for the asswaging of some Symptoms; thus Experience, the Mistress of Fools, has shown the matter to be.

XVI. Whatsoever is unexperienced and new to us, as long as we are ignorant of the cause and reason of it, uses to breed admiration in us; as it happened to me, for I observed, and indeed in my self first, that a Cough, which followed a Catarrh, gave way but slowly to ordinary Medicines, which used to cure such a Cough easily, and that it troubled us most upon going to Bed. Now this observation being made in my self, yet infirm, and in others, seemed strange, and made me curious diligently to enquire the cause and reason of this event; And having observed that Wind troubled me at the same time, I fell to take things to discuss Wind, first in Bed, and then a little before I went to Bed: Whence it came to pass, that when I had belched up Wind sometimes, in a short time the Cough, that was almost dry, was stopt, which otherwise tormented me a quarter of an hour and sometimes longer. From this experiment happily made with like success in others, I thought I got the reason following, to wit, That great store of Phlegm meeting in the small Guts, was by the heat of the Feathers dissolved, and by the sharp bile, then also disturbed, reduced into Wind, which was by and by carried to the Lungs, by which the Lungs being irritated did Cough, and by Coughing did shake all the rest of the Body, and the Brain, and the Humours contained therein, which falling upon the Throat, made as if all were produced there: till having observed Wind, and the ascent of it, the cure of this Cough was eased by Oyls called Carminative, taking a few drops of them in some convenient Liquor, before one laid

down in Bed. ¶ Coughs oftentimes followed Rheums; but the Coughs gave way with more ease and success to things that discuss Wind, than to such as temper Salt briny Humours. Wherefore I showed, that they had their rise not only from a Salt briny Humour, falling from the Head upon the Throat and *Aspera Arteria*, but, and especially, from store of Wind, with a slight Fit of a Fever, carried from the small Guts, by the lacteal Veins and the Thoracick Duct into the upper *Vena Cava*, and thence into the right Ventricle of the Heart, and by and by into the Lungs, irritating the same to Cough, and that it troubled People most, as they went to Bed. But as soon as I observed this first in my self and then in others, the cure for this Cough was eased, by taking Aromatick Oyls that discuss Wind, as Oyl of Orange Peel, Citron, Anniseed, Fenil seed, &c.

Idem.

So I remember above ten years since, the Illustrious and Generous *Monsieur de Verasse*, Kinsman to the Illustrious *Bernardus Budæus*, did commend to me and others, upon his own experience, a Decoction of Anniseed, whereby he affirmed, he had often cured a Cough.

XVII. Blood falling from the Head upon the Lungs, and raising a Cough, must be stopt in its Flux, and indeed by Bleeding, if a *Plethora* concur, or any notable effervescence of it, or a suppression of some wonted evacuation of it, although its too great Heat may be stopt with things a little acid, but especially with things a little austere. Let the following Apozeme serve for an example; Take of leaves of Plantain 2 handfuls, Houfe-leek, Sorrel each 1 handful. Boyl them in Barley water to 20 ounces, adding of Syrup of Jujubes 3 ounces, Salt peter purified 1 drachm, or *Sal prunella* half a drachm, or Spirit of Nitre 20 drops. Mix them. Make an Apozeme. Let the Patient take a middling draught of this now and then to stop any other violent motion of the Blood. The same Blood must be stopt in its efflux by conglutination of the open Vessels by proper Remedies.

Sylvius de le
Boë.

XVIII. The corruption of the Blood into *pus* or matter must be prevented by all means, and especially by *Balsamus Sulphuris anisatus* or any other, that is not ingratul, seeing that by the help of this not only the turning into *pus* or corruption, and further hurt of the Ulcerated part is prevented, but moreover the total cure of it is promoted. The Dose is a drop or two in some convenient peccoral mixture.

Idem.

XIX. And lest the same Blood, whence soever it come into the *Aspera Arteria*, should be coagulated there, and then corrupted, it must immediately be kept dissolved with convenient Medicines, or must be dissolved again and voided: To which end Crabs Eyes dissolved partly at least in a little distilled Vinegar, together with diaphoretick Antimony, taken with some grateful things must be preferred to many other things, for example, let the following prescription be taken a spoonful at once; Take of water of Hyssop, Fenil each one ounce, *Aqua vite Matthioli* 2 drachms, distilled Vinegar half an ounce, Crabs Eyes half a drachm, diaphoretick Antimony 1 scruple, Syrup of Maiden-hair 1 ounce. Mix them.

Idem.

XX. But we must have a care in such mixtures, as have Crabs Eyes dissolved in Vinegar in them, that Syrups made of Mucilaginous things be not added to them, such as *de Althea Fernelii*, of Jujubes, Violets and the like, because they grow presently thick and unfit for use, which would not easily be, if Syrups made of Aromatick things be used, and especially new enough, since several in tract of time grow viscid.

Idem.

XXI. A dry Cough arising either from cold Air or drink will be cured by often holding the Breath some while, that, when the heat is encreased in the Throat

Throat and Lungs, the fault may be amended which arises from external Cold. And I must say, that in this case holding ones Breath as long as one can, does not a little conduce to restrain and stop any Cough, and a dry one especially; by which means I have observed often in my self and others, that a Cough otherwise troublesome enough has either been wholly removed or abated; and I have also seen a Hickup thus cured.

XXII. The Spasmodick Cough in Children is difficultly cured, because not only the Blood must be altered, as in an ordinary Cough, and its recrements should be discharged and derived from the Lungs, to the habit of the Body by transpiration, but moreover an amendment of the Nervous juice must be procured. The method of cure usual in other sort of Coughs seldom does good here, wherefore neglecting the rational method, most use only empirical Medicines. Among many the two following are usually preferred, that is, *Musculus pyxidatus*, and its various preparations, which (as far as we can gather from the Taft) is of an astringent virtue, and contains in it self something sharp particles, favoring of store of volatil Salt, whence we may conjecture, that its use is to fix the Blood, and stop fluxions of the Serum, and moreover by volatilizing the Nervous juice, to remove the Spasmodick disposition. The other Remedy uses to be, to put the Children into some sudden fright; the reason whereof consists in this, because the animal Spirits being put to flight, and forced into new distractions, do leave their former disorders: And moreover the Spasmodick matter is either dispersed by this perturbation, or else it is driven into other Nerves, where it is not very troublesome. Such as are of an hot constitution, and, while they Cough, have an intense red, or rather a black Countenance, I prescribe them Phlebotomy, or Bleeding with Leeches to the loss of 2 or 3 ounces, and sometimes with good success; Take of live *Millepedes* cleansed 1 ounce, powder of Anniseed 1 drachm, Nutmeg half a drachm, white Sugar 5 ounces; when they are bruised, pour to them water of Hyssop 6 ounces; *Limacum magistralis* 2 ounces. Mix them a little in a Mortar, make a strong expression. The dose 2 or 3 spoonfuls twice a day. In the Winter, when Snails cannot be had, Sheep's or Calves Lungs, parboiled and minced must be put in their stead, &c.

XXIII. There was an universal Cough at Rome, and many died. A certain Physician cured himself and several others with this Medicine; Take of Iujubes N° 25. Figs N° 10. Large plump Raisins 1 ounce and a half, scraped Liquorish 3 drachms, roots of Coltsfoot 1 handful. Boil them in a sufficient quantity of water, till half be consumed away. Take a Glass of it every Morning and at the hour of Sleep. They abstained from Wine, and Flesh, they used Bread boyled with Raisins and Butter; or Butter, Bread and Sugar; or Bread boyled in Milk and Sugar.

XXIV. *Celsus* l. 4. c. 3. advises to use reading aloud. Some question, whether this be a proper Remedy, since loud reading dries: But it may be answered, that it certainly does good, because it dries up Phlegm, from whence an old Cough is reckoned to derive its original. Besides, *Antyllus* in *Oribasius* advises to use it, if drought and heat seem to abound beyond measure in our Bodies. Much Air entering by respiration into the passages, will very much moisten what is dry, and because it is of more tenuous parts and more liquid than any water, it will soften hardness caused by dryness. But we must take notice, that the actions of the voice must not be used rashly and unadvisedly,

and especially by them that are not used to the exercise, and are but beginning.

Medicines especially made use of by eminent Physicians.

1. This conduces greatly to mitigate inveterate Coughs, arising from cold and gross Humours; Take of Pine nuts roasted, Starch, Liquorish, Nettle seed, Linseed each 2 ounces, Orris, Pepper, Hyssop, Cresses Seed, bitter Almonds each half a drachm. Mix them with well clarified Honey, and give a small spoonful of it.

2. This is an excellent Remedy for great defillations; Take of Storax, Castor, Pepper, Cardamome, each half a drachm, *Opium*, Jujubes, Henbane Seed each half a drachm. Let the quantity of a Vetch be given to them, when they go to Bed. ¶ The Medicine of the ancients for an old and dry Cough. The common People in a desperate Cough take dayly bruised Beans boyled with Garlick for their meat, and Marsh-mallow flowers boyled in Milk, as a present Remedy.

3. In a Cough caused by a sharp defluxion I gave the yolk of a raw Egg with Sugar Candy, and immediately the Cough went away, so that there was no need of other Remedies. ¶ For an old dry Cough, for Consumptive, Pleuritick, Asthmatick Persons, and such as have a violent Cough I use this; Take an Apple, cut off the top, hollow part of it out, fill it with Honey of Roses, and cover it with the piece first cut off, roast it, and eat it at Night, when you go to Bed.

4. Take Juniper water 6 drachms, white Sugar Candy bruised 2 drachms. Mix them. Burn it with threads dipt in Brimstone, and let the burning threads be put into it also, stir the Liquor, and let it burn, till the Sugar dissolves, then strain it, add to it of Saffron 1 Scruple, of which take a spoonful Morning and Evening. This Liquor loosens and dissolves all Coughs coming from cold Humours.

5. This exceedingly stops a Cough and thin Catarrhs falling upon the Breast; Take of Conserve of Roses 1 drachm, Mastich half a drachm, with as much *Diacodium Montagnana* as is sufficient, make a Bolus.

6. Milk drunk warm, with Sugar Candy or Penidy mixt with it, is very good. ¶ This is very good, Take of the heads of Garden Poppy almost ripe, 3 drachms, *Siliques* freed from the Grains, Liquorish each 1 drachm. Boil them, and add to the colature of Sugar Penidy and Candy each 4 drachms; Boil them again till they grow thick. Use it instead of *Diacodium*, licking it in the Night. ¶ Some write that red Poppy water with Sugar Candy drunk in the Night is very good in a Cough. ¶ Some cry up Garlick mixt with Bears grease, and applied to the Soles of the Feet, as a certain Remedy to cure a Cough.

7. A Deer's Lungs dried with the Wind-pipe in an Oven and powdered, and mixt with Honey, is good for a Cough.

8. I have experienced this to be very good in a Cough without a Fever; Take of *Diapenidium*, *Diabolibanum* each 1 drachm, *Loboch sanum & expertum*, *Diastragacanthum frigidum* each half a drachm, Syrup of Galesat de S. Liquorish 1 ounce, of Hyssop 1 ounce and an half. Mix them, make an Electuary.

9. Take

Arnold. Vil.
lanovanam.

9. Take the crum of a Loaf as it comes hot out of the Oven, fry it in Swines blood, and give it with Honey. This only has cured several of a Cough.

10. There is nothing better for a Cough, than juice of Turneps boyled and Clarified, especially if fresh Butter and Sugar candy be added, and the Soles of the Feet be anointed with the Fat of a

Pike, it is very good in a Catarrh and Children's Weikardus Cough.

11. The middle rind of Bittersweet boyled in Mede is very good for a prevailing Cough: For such a drink is exceeding grateful to the whole region of the Breast and Lungs, wonderfully purges all filthy matter and rotten Phlegm, and strengthens all the Parts.

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A GUIDE TO The Practical Physician.

BOOK XVIII.

Of Diseases beginning with the Letter V.

Varices, or Swollen Veins.

The Contents.

- The Cure by pricking and cutting. I.
When opening is safe. II.
Sometimes must be burnt with Causticks. III.
The Cure by cutting suspected. IV.
The benefit of opening a Vein in the Leg. V.
The Cure according to the Laws of Circulation. VI.
They that come of crude Blood are more safely cured than they that come of a Melancholick Blood. VII.
Medicines.

I. **T**He Chirurgical handling of Varices is twofold, the one is opening by a certain Puncture, as simple Section, according to the nature of Veins: the other is by cutting the Vessel asunder, or cutting part of it out. We open Varices, that the Patients may at least get some relief, when both themselves and they that have them in hand, are afraid to cut them out: then I say, they must be purged with a Lancet, of which operation Hippocrates l. de Vlc. numero 16 makes mention; Where there is a Varix of the Leg either conspicuous, or in the Flesh, and the Leg is black, and it seems to have need of the Blood, that runs by it, you must by no means cut such through, for oftentimes great Ulcers come from the Fissures, by reason of the running of the Varix, but you may again and again prick a Varix when you think it convenient. The sense whereof in short is this, that you must not thrust your Lancet in promiscuously, where the Swelling is, but that the Varix it self may be gently pricked in several places, where it is turgid, that a convenient quantity of Blood may be taken away. But Galen 4. de comp. med. 2. p. c. 3. advises first to scarifie lengthways a Varix, that is near an old Malignant Ulcer, before the rest of the cure be undertaken. Albucasis l. 2. c. 92. advises to do it thus: Let the Leg, saith he, be fomented with warm water, and let the Thigh be bound from above downwards to the Knee,

with a Roller. The Vein must be cut underneath, with one, two or three pricks of a Lancet, squeezing out the Blood both above and below with both Hands, as much as you shall think convenient, bind down the wound, and the Man is cured. Thus much of opening the Varices, now something of cutting them out. Galen 3 meth. c. 4. and Aetius ser. 14. c. 4. advise, that if Varices be joyned with an Ulcer, it is in vain to hope for a Coalition of the Ulcer, take what pains you can. I have seen Men in our Hospitals, who have had Ulcers two, four, seven years old or Elder, who, when the Varices that were about it were cut out, were happily cured, contrary to all Mens expectation; but it is wonderful, that, when the places below are annoyed with grievous pain, there remains no Ail, where the Varices, that are much higher, were cut out. It is wonderful also, that the Swelling of the parts below should all vanish, and the part should be repressed to its natural place, as soon as these twining Vines are cut out, just as when the River is dry the Plants wither. One Marinellus l. 4. de Mul. ornam. sayes, that when the Varices are cut out the Limb withers: But I can contradict him; for I have cut out several, and never observed any such detriment follow: For what reason is there, why for lack of one Vein a part should cease to be nourished, when several meet together to irrigate it? Severinus.

II. If we observe, that a Melancholick juice actually falls, from the Bowels into the Varices, and that the Body does abound with Melancholy, then the Varices must by no means be cut, for according to Galen lib. de atra bile c. 4. The Varicous are in danger, if you cut the Varices, of becoming Melancholick. And Avicenna l. 3. f. 22. c. de Var. teaches us, when they should be cut, saying, That if Melancholy be not discharged by the Bowels upon the Varices, and if the Blood be clean, you need not fear to cut them: But if it be discharged, and the Blood be impure, they must be cut, because Men will become Melancholick, and fall into worse Diseases. Sanctorius, Meth. l. 6. c. 9. Varices are either old or new; if old they must be kept, the fluxion to the Legs being intercepted, by

Sylvaticus,
Corf. 98.
Geni. 3.

by frequent evacuation of Serosity by purging with Hydragogues; and by Urine with temperate Diureticks. But if they be new, they must be cured by opening them and taking out the Blood, making first a ligature above, but especially below the dilated Vein, for fear of immoderate evacuation, and then the place must be cicatrized by astringents and glutinatives, insinuating upon the operation in the same manner, as *Paræus* delivers it, *Chirurg. l. 12. c. 20.* ¶ Some *Varices* may safely be cured, and we are forced to cure them: Some cannot safely be cured, yet we are forced to cure them; And some can neither safely be cured, nor are we bound to cure them. If therefore the cure be safe, and you be not forced by the Ulcer, you ought to cure the *Varices*: If neither the cure be safe, nor you compelled, they must not be cured: But if the cure be not safe, and yet you be forced by the *Varices* and by an Ulcer, you must try to cure them. Now the cure is safe in a Body not *Cachochymick*, and if the *Varices* be not writhen; when the beginning of them is not in the Groin, and when the Patient is obedient; also when there is no fear from a plenitude, whereby a new dilatation may be made: In these cases the cure may safely be undertaken. Sometimes, though the cure be not safe, yet we are forced to attempt it; I say, we are forced sometimes by an Ulcer, that is very painful, or over runs the whole Leg, or corrupts the Bone, or is Malignant, or the like: Sometimes we are forced by the *Varices* themselves, which are sometimes great and turgid, so as they would break, were they not intercepted, and having made a great effusion of Blood, they kill, of which I have seen two dye. Whenever therefore you see the *Varices* turgid, try to cure them, otherwise that Blood will erode, and the *Varices* will break.

Fallopianus, l.
de Ulcer. c.
16.

III. I observe, all *Varices* are twofold, some writhen, called by the Arabians *Vines*, others simple, running straight along, although they go transverse: It is the best way to burn the former; but some have reckoned that the straight peculiarly require burning. I have found by experience and long observation, that it is the safest way also to burn them that are cut out, with a red hot Penknife, having an Iron plate put underneath: for if it corrupt, it turns to a *therioma*, which when it happens, it must also of necessity be treated with fire. *Alysc. l. 1. c. 55.* sets an Iron pipe with thin edges, red hot, fit to the tubercle, upon corns; and so may *Varices* be burnt, which twine about the Thighs. And as to them in the *scrotum*, to be cured with a Caustery, there is no great difference, but that *Celsus* pierces them with thin and sharp Irons, *l. 2. c. 22.* Here we may add what *Mengus* delivers, that we may cure *Varices* with a Caustick, which may break both the Skin and Vessel, to the end that, when the Ulcer is cleansed and healed, the growing *callus* may stop up the *Varix*. After which advice indeed *Varices* are often burnt, but not with an Iron, lest Men should be affrighted. For this purpose I chose me some large and smooth Galls, pieces of which as big as a Child's Thumb, and in that form, when I have applied them to the Vessels in several places, I set them on fire, and suffer them to burn out. A Nun had a very painful *Varicle*, and when she could find ease by no Medicines either inward or outward, when I had set fire to it, it was discussed at once.

Severinus.

IV. The Chirurgical cure of *Varices*, which *Aquapendent* propounds *cap. 105. Operat. Chirurg.* as it is abhorred by most, so bad Symptoms may easily follow it. I saw a Country fellow, who being ill of painful *Varices* in his Leg, underwent the Surgery, with very good success, under *Spigalius* his Hand. I, in imitation of him, once tried the same operation, first of all I cut the Skin, then I separated the varicose Vein: I tied it on each side with a Thread, I elevated it with a Hook, and cut it cross the mid-

dle. But by the Patient's error, that is, by too much motion, none of which should have been used, before the wound was healed, an Inflammation arose, which cruelly afflicted the Patient, and hindered the success from being according to desire. Wherefore the Patient and his Parents often wished, that the said Inflammation might leave their Son, and take and torment me. Having once made Shipwreck of my fame, I ever after treated such as had *Varices* in their Legs either with Stockings made of a Dog's Skin, or I also applied topical Medicines *Sculretus* to the same Leg under them.

V. Some get benefit by opening the crural Vein, as I observed in a certain Melancholick Person, who by often opening of it, freed himself from so great a trouble. But upon taking over much pains, having neglected Bleeding in his Leg, he avoided much grimeous Blood upwards and downwards, a quiet death following a little after, and no sign appearing outwardly of his *Varix* being broke. It is very likely therefore that the internal *Varices* (which some will have to be common to all Veins, because there are valves) were broken.

J. M. Ferla
mife. curios
an. 1676.
Obs. 26.

VI. *Varices*, now the circulation of the Blood is discovered, must be cured contrarywise to what they were formerly: for the Vein must be bound above the *Varix* not below it.

Walrus.

VII. The Ancients called all dilated Veins *Varices*; and sometimes they come from abundance of Blood which is not Melancholick; but sometimes the Veins are stretched and become varicose from other gross Humours; and especially in the Legs, where the blood, because of its grossness and viscosity, does not so easily move; which after stirring grow black and blew, to wit, when the Blood is heated, and therefore changes colour: But the cure of this varicose affection need not be feared; as the cure of a black one, and that comes from a Melancholick Humour, is suspected, and full of hazard. Yet the true and absolute cure of it is difficult, and must be performed by Surgery: For though *Celsus* bear one in hand, that the cure is not difficult, yet the event does not answer his promises, while he propounds the operation by the knife and fire, as barbarous. Nevertheless, their true and legitimate cure is their extirpation; which cannot be done but by Surgery, that is by fire and the knife according to *Celsus*; only by the knife, according to *Paulus*; by the knife also, according to *Hippocrates* who uses prickings, to avoid a great Ulcer. Among all which Operations that of *Paulus* is to be preferred (See *l. 6. de re Med. 82.*) as safest: for *Hippocrates* his pricking abates the *Varix*, but takes it not wholly away: And *Celsus* his burning, if it be done with red hot Irons, Ulcers are raised scarce cureable; if only with hot ones, the *Varix* will not go away.

Fortis, Conf.
95, Cent. 4.

Medicines especially made use of by eminent Physicians.

1. Take black Snails as many as you please, put them in a Glass, sprinkle them with Salt, and expose them to the Sun, and they will dissolve into Liquor, of which Liquor take 3 ounces, phlegm of Vitriol 1 ounce and an half, Oyl of Roses 2 ounces. Boil them together to an Unguent; wherewith I anointed the *Varices* and they presently went away.
2. Nothing so much restrains the Poyson of them, as Man's Fat. Also oyl of Juniper is a principal Remedy.
3. The roots of the Plant, which they call *Circæa Dioscoridis* bound to the place affected help, and ease pain: Moreover I have found by experience, that only the Leaves laid to the *Varices* are admirable good.

Joh. Agri-
cola.

Paracelsus.

Solenander.

Variolæ.

Variolæ, Morbilli, or the Small Pox and Measles.

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I. **T**he Small Pox, those years they are epidemical, if they be also regular and gentle, begin about the Vernal Equinox; but those years they do not spread epidemically, and are irregular and of a more dangerous sort, they invade sometimes more early, perhaps in January, infecting whole Families, and sparing none of what Age soever they be, if they have not had this Disease before.

Sydenhami
Observat.
circa Morb.
acut. p. 165.

II. There are two sorts of them, for either they are Distinct or Confluent, which although they differ not essentially, as they say, yet by some remarkable Symptomes, which attend one sort, but not the other, it is no hard matter to distinguish one from the other. The interstinct or discrete come with a Shivering and Coldness, which is presently followed with excessive Heat, a violent pain in the Head and Back, vomiting, a great propensity to Sweat (I mean in grown Persons, for I never yet observed any such disposition in Children, either before or after they come out) a pain at the Stomach, if you lay your hand on the Pit of it, Dulness and Sleepiness, especially in Children, and sometimes epileptick Fits, which Fits, if they take Children, that have bred their Teeth, I reckon the Small Pox are at hand: And when the Small Pox come immediately after such Fits, they rise in large Pustules, they are mild and kindly, and seldom Flux. Distinct Small Pox come out for the most part on the fourth day, sometimes later, very seldom sooner. That sort, which we call Confluent (or, as the People call them, Flux) Pox, have their Symptomes common with the other, only here all things are more violent, to wit, the Fever, Restlessness, Vomiting, &c. afflict more violently, by which signs the Confluent Small Pox bewray themselves to a sagacious Physician, before they come out. Nevertheless here the Patient is not so apt to sweat, as in the other kind, wherein grown People, that have any inclination to Sweat, cannot be kept out of one:

H h h h

Sometimes

Sometimes a Loosness comes before their coming out: This sort comes out generally on the third day, sometimes before it, scarce ever after it; whereas the Distinct show themselves the very fourth day, inclusively from the first being taken, or after, very seldom before: And by how much sooner they come before the fourth day, so much more they will Flux. And although, to speak in general, the Confluent scarce ever tarry till the fourth day, yet it may so happen, though seldom, that their coming out may be deferred till the fourth or fifth day, by reason of some grievous Symptom, as, a most violent pain sometimes in the region of the Loins, like a fit of the Stone, sometimes in the Side, like a Pleurisie; and sometimes in the Stomach, with violent Vomiting before they come out: In these Cases I have observed the Small Pox to come out later than ordinary, because they were restrained and hindered by the extreme violence of the said Symptomes, which Symptomes indeed being more violent than ordinary do plainly indicate to me that the following Small Pox will be of the Confluent kind, and not without danger.

Idem.
p. 171.

III. And there are two Symptomes that attend the Confluent Small Pox, which are as considerable as the Pustules, or Swelling, or any other, that is, Salivation in grown Persons, and a Loosness in Children. The first of these is almost ever a concomitant. It may be, Nature substitutes these evacuations, because in this small and low sort the morbid Matter cannot so fully be discharged, as in the larger and higher Pustules in the Distinct. And this I certainly know, that they do not only always accompany the Confluent Small Pox, but evacuation by them is necessary, as either Pustules, or swelling of the Face and Hands.

Idem.
p. 174.

IV. I ingenuously acknowledge I know not what the Essence of this Disease is, but all the Symptomes seriously considered seem to subindicate to me that it is an Inflammation (but yet specifically distinct from other Inflammations) of the Blood and other Humors, in getting off of which it is Nature's business for 2 or 3 of the first dayes to digest and concoct the inflamed Particles, which afterwards when discharged into the habit of the Body she still ripens, and at length expells out of her territories in the form of little Abscesses. Hence we may take notice, that there are two times in this Disease, of Separation and Expulsion. The first for the most part is spent in the febrile Ebullition, which is performed in 3 or 4 dayes. Separation being thus finished, by the help of Ebullition, in the Blood, Expulsion now takes place, which is performed all the rest of the time of the Disease by means of these little Abscesses. Hence arise these Indications, 1. That an aquable Tenor may be kept in the ebullition of the Blood, that it may not by excessive violence perform Separation too hastily, nor yet by a too torpid Motion may retard the same, or not perform it sufficiently. 2. That the Abscesses, or Pustules may be kept up with the greatest care, that as they run over their due times, they may at length wholly carry off the matter contained in them, and they may also fade away.

Idem.
p. 183.

V. As to the first Indication, we must be solicitously careful, especially at this time, that the Ebullition rise not too high, either by heaping too many Clothes on, or from the Air of the place where the Patient lies, being over-heated by the Fire, or by the use of hot Medicines and Cordials. And you must especially beware of these Things, if the Patient be in the flower of his Age, or have his Blood too much exalted with generous Liquors, or if it be the Spring-time, or but the beginning of Summer. For hence it would so fall out, that Separation, which ought to be

performed insensibly and by slow degrees, so as it may more opportunely perform an universal despumation, would be precipitated, and so either not a sufficient number of Particles be gathered, or (as perhaps it may happen) some Particles may be condemned to Secretion, which Nature otherwise would not have had them undergone, but that being forced to run beyond her Bounds, she creates this Mischief to her self: For when they are separated which are not so fit for separation, the Motion of others that have an inclination to it, is hindered by them mixing together, and so are rendered unfit for Expulsion. To me indeed it seems consentaneous to reason, that the longer Nature is in working and perfecting Separation, so that Ebullition be not quite torpid, so much more certainly and universally the same Separation is performed: And upon its being so finished, it is necessary that the success of the following Cure must especially depend, as from a contrary Method the event of the business must be quite contrary. For from that hot Regiment no good comes, as from an over-hasty Fruit no advantage. Seeing it frequently happens, that the Patient falls either downright into a Phrensy or (which is worse) great Sweats arise, whereby Particles not fit for Separation, nor answering the Nature of Pus (which very Pus notwithstanding is the genuine product of this Excretion) are eliminated: Or the Small Pox, being too much forced out by giving Cordials, and by hot keeping, run all into one, a foul Speckle, and one that threatens a sad Event. And these and the like Symptomes are usually bred of these Errors, whereas I never observed any mischief, from the other Method. For Nature let alone to her self does her Work in her own time, and separates, and then expells the matter in due order and way, so that (in the younger sort especially and those of a lively Constitution) the needs not our help, being furnished with strength sufficient of her own. For neither have I seen or heard of any, that miscarried because the Small Pox came not out at first; although too many have perished, in whom the Small Pox at first came out laudably and hopefully, and have afterwards, upon the striking in of the Pustules, fallen before they were ripe.

Idem.
p. 185.

VI. And as it is unadvised and hazardous to advance too high the Ebullition once begun by means either of a hot Regiment or by Cordials; so on the contrary there is no less danger, to diminish the same by means of Emetics, Catharticks or any such thing, seeing by this means the proper secretion of the separable Particles is much hindered: Although that vulgar Argument, which Men use against Bleeding and other Evacuations (namely, that we must not move the Humors from the Center to the Circumference, since Nature seems to affect the contrary in this Disease) be of no force at all, because upon using these means, a quite contrary effect has often been observed to follow, to wit, a sudden coming out of the Small Pox; yet there are other reasons in readiness, which strongly persuade, that, if by any means it may be voided, we meddle not with this Practice. For (briefly to touch upon the chief of them) by these Evacuations not only the Ebullition is too much hindered, by means whereof the Particles to be despumated ought in the mean time accurately to be separated, but that also is subtracted, which should continually as it were afford fuel to the Secretion begun: Whence it often happens, that the Small Pox coming out at first with a laudable Progress (and perhaps so much the better, because the said Evacuations preceeded) do a little after, struck in as it were all on a sudden, fall flat; and for this reason chiefly, because there wants matter to follow

Idem.
p. 188.

Idem.
p. 190.

Idem.
p. 191.

Idem.
p. 187.

follow that which went before and bring up the Rere.

VII. As to the second Indication, which concerns the time of Expulsion, as it is dangerous, if the Patient, when there is a Fever, and the Pustules scarce yet appear, be made over hot in the very time of Secretion; so also it is a thing full of no less danger, if the same be done at any time of the Disease, and especially at that which is towards the beginning of Expulsion, while the Pustules are yet Crude: For although the Blood, now that Separation is done, and the matter discharged to the carnos Parts, be in a great measure free from intestine Tumult; yet it being as yet tender and young, and having scarce got induction into a new state and texture, it is apt to suffer, and easily be affected by virtue of immoderate Heat coming from all places, and so being irritated upon the least occasion, it takes fire, and is inclinable to a new Ebullition: Which new Ebullition does not, as the former, now endeavor a Suppuration (for we suppose that already finished) but instead thereof, it not only raises the above mentioned Symptoms, but disturbs the Expulsion, begun by the Pustules, and does harm by exagitating the contained matter. Either therefore the Parts now separated and left in the habit of the Body, being hurried by that violent and rapid course of the ebullient Blood, are drawn again into its Mass, or the carnos Parts being heated beyond the degree due to Separation, do not so well perform it; or lastly, perhaps upon the coming of this new Sickness, the economy of the Blood, and the tone of the Flesh is perverted, so that it cannot overcome the matter expelled, and concoct it after the usual manner of Abscesses.

Idem.
p. 188.

VIII. In the mean time we must not be so intent upon preventing too great an Ebullition in the Blood, as by exposing the Patient to the injuries of the Cold to hinder the eruption of the Pustules. The degree of Heat, most proper to promote their Expulsion must be natural, and such as is agreeable to the temper of the carnos Parts: And whatever exceeds or comes short of this is dangerous on either hand.

Idem.
p. 190.

IX. If the Pustules chance to strike in, or the swelling of the Face and Hands fall, upon Bleeding unseasonably, or getting of Cold, we must use Cordials; but we must have a care of being too lavish in giving them; for though you have taken away Blood, yet it may so fall out, that while you are afraid of loss of strength thereby, and so use Cordials, either strong ones or often repeated, you cause a new Ebullition on a sudden: For the Blood is as yet tender, and is easily sensible of the strength of a hot Provocative; Whence it comes to pass, that often repeated Ebullitions arise in the same, to which the Patients death may of better right be attributed, than to the foregoing Blood-letting.

Idem.
p. 191.

X. Moreover, the Small Pox must not therefore immediately be forced out; as soon as any suspicion of this Disease arises, because forsooth the Patient is usually very sick and restless before their coming out, when there cannot so much as one Instance be shown, that any one died how grievously Sick soever he was, because the Small Pox came not presently out, or, that Nature was wanting in forcing them out sooner or later, unless at any time she were hindered by a too hot Regiment, and Cordial Remedies, given too early: For I have more than once observed in young People, and of a sanguine Complexion, that a hot Regiment, and Cordials given on purpose to force out the Small Pox before their due time, have so little promoted their coming out, that on the contrary they have given a check to it. For, the Blood being heated by these means, and put into

a more violent Motion, than is fit to perform aright the separation of the Variolous Matter, only some certain tokens of the Disease show themselves, while the Pustules, lie within the Skin, and do not raise themselves further, by what Cordials soever they were solicited to it, till at length, the Blood being reduced to its moderate and due Temper, that is, by allowing small Beer, and taking off part of that load of Clothes, wherewith he was rosted, I have made a convenient way for the Pustules to go out, and so I have put the Patient out of danger.

Idem.
p. 193.

XI. Nor also would I advise you to give a Cordial before the said fourth day, though a Loosness were urgent, and might seem to indicate the giving thereof: For although a Loosness sometimes go before the coming out of the Confluent Small Pox, which arises from inflammatory Vapors or from the Humors discharged into the Guts, out of the mass of Blood, that is exagitated and boyls for the first dayes, yet here Nature will be no more wanting in driving out the said Vapors of the Variolous Matter, into the habit of the Body (which being done, the Loosness will stop of it self) than she uses to be in turning out and eliminating those Vapors, which being turned upon the Stomach, cause Vomiting at the beginning of this Disease.

XII. As soon as manifest signs of this Disease begin to show themselves, I forbid the Patient the open Air, and drinking of Wine, and eating of Flesh, but I allow them a little small Beer warm with a Tost, and sometimes as much as they have a mind to drink. And I order them for their Victuals Oatmeal and Barly grewel, roasted Apples, and other things, which have neither excessive Cold nor excessive Heat in them, nor give any trouble to the Stomach. I keep them from a hot Regiment, and from the use of any Cordials whatever, whereby some endeavour rashly to force the Small Pox to the Skin, before the fourth day, which is the proper and natural time for coming out. Whereas I am certain, that the separation of the Variolous Matter will be so much the more universal, by how much the longer they are in coming out, and we may therefore be the more secure that they will not strike in again, and that they will ripen the better. But if they be forced out before the time, the Matter as yet crude and unconcocted is precipitated, which, like Fruits too soon ripe, feeds us with vain hopes. Moreover there is danger from this over hasty diligence (especially in hot and brisk Constitutions, whose active Principles do more than enough supply the use of Cordials) lest Nature, being irritated and forced too much, do melt almost all the substance of the Body into Small Pox, so that now they will flux, which, but that you made too much haste, would have rested in the order of the Distinct, with far greater hopes.

Idem.
p. 192.

XIII. Nor have they any more reason on their side, who so pertinaciously confine the Patient to his Bed before the fourth day, than they who so over early and unseasonably pour down Cordials: For bloody Urine, purple Spots and other Mortal Symptoms do come upon People, in the flower of their Age especially, because they are over soon confined to their Beds. But on the fourth day I order my Patient to his Bed, and then, if they come not out as one could wish, some gentle Cordial may well be given, at least for once, to drive out the Pustules.

Idem.
p. 194.

XIV. Among the Medicines, that make for this purpose, those they call Paregoricks, such as *Laudanum liquidum*, *Diafcoridum*, &c. if they be mixt in a small quantity with some proper Cordial Waters, excell the rest: For when these things give a check to the effluating Blood, Nature more reasonably and freely casts out the moribick Matter.

Idem.
p. 195.

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XV. If

XV. If I am called to a strong young Man, who has besides given occasion to the Disease by liberal drinking of Wine or any spirituous Liquor whatever, I reckon it not sufficient for restraining the Ebullition of the Blood, that he abstain from his Bed and Cordials, unless moreover he be let Blood in the Arm. But if this cannot be granted, through the prevailing prejudice of the Vulgar, I beg that I may bleed him. For when that Inflammation, which the Heat of the spirituous Liquors impressed on the Blood, is added to the intense Heat, that attends this Disease, the Blood so rages, that sometimes by the duct of the Vessels it breaks into the Bladder; or causes purple Spots, and other such Symptoms, as through the whole cause of the Disease stand in the Physician's way, and carry the Patient off.

Idem.
p. 196.

XVI. When the Pustules first come out, I then diligently consider, whether they be of the Distinct sort or of the Confluent, because they differ exceedingly one from the other, though they agree as to some Symptoms. If therefore, from the bigness and smallness of the Pustules, and the slowness in coming out, and from the vanishing of Sickness, and other Symptoms, which tire a Man after the coming out of the Confluent, it appear to me that they are of the Distinct sort, I order my Patient to be kept with small Beer, Oatmeal and Barly grewel, &c. And if the Small Pox be, but few, in Summer time, and that very hot, I see no reason why the Patient should be kept stifled up in Bed: And why he may not rather rise a few hours every day, provided, the inconveniencies of too much Cold or too much Heat may be prevented by the Place and Clothing: For when the Patient keeps up sometimes from his Bed, the Disease runs its course, with less trouble and in a shorter time, than if he had continually been fastened to it; which not only makes the Sickness more tedious, but increases the febrile Heat, and when the Blisters arise, cause a painful Inflammation. But if either the cold Season of the Year, or a large eruption of exanthemata lay the Patient under a necessity of keeping his Bed always, I take care that he lie not hotter, nor with more Clothes on him, than when he was in Health, and to have a fire kindled only Morning and Evening, unless the Winter be hard.

Idem.
p. 197.

XVII. I would not have the Arms always kept covered with Clothes, or that the Patient should lie always in one place, lest he sweat too much, which upon confidence of my experience, I boldly affirm, can never happen (especially in young Men) without extreme hazard. I would therefore have him lie free in his Bed and now and then change places.

Idem.

XVIII. When the Disease is determining, because the free eruption of exhalations, that proceed from the Matter now converted into Pus, is hindered by the Pustules, which are at length grown crusty and hard, it would not be amiss to give 3 or 4 spoonfuls of Canary Wine hot, or some other temperate Cordial Medicine, lest these putrid Vapors return again into the Mass of Blood, and truly now, and not sooner, is the time for Cordials. At the same time also, a little hotter Diet, and more Cordials may be given, that is, Panada's made with Beer and Sugar, and Oat-meal Caudle: Nor is there need of any other things at all, that is, in the Distinct and gentle sort, if the Patient will but suffer himself to be treated in this Method and with this Diet, both moderate.

Idem.

XIX. This indeed, though Men's ill grounded prejudice cry out upon it, is the true Method of curing this sort of Small Pox. And although I do not deny, but they, that have been treated with a quite contrary Regiment, have recovered, yet we must acknowledge (though this distinct kind have no danger at all in them from their own Nature) that

nevertheless many dy; And many more also would yield to Fate, but that they are saved, either by the cold Season, wherein the Disease happens, or by Blood-letting (otherwise unnecessary and useless) lately celebrated. Upon which account, if either the obstinacie of Friends, or diffidence of the Patient hinder the aforesaid Regiment, I reckon it safest to let Blood: Which indeed, though of itself it do hurt (inasmuch, that is, as it disturbs and confounds Separation, and moreover substracts the sustenance designed to keep up the Pustules and Swelling) yet it makes compensation for the hot Regiment, which will follow within a while, and therefore renders this Method, which we would not use but against our will, not so dangerous and doubtful.

Idem.

XX. It appears from what has been said, why so few of the common People dy of this Disease, compared with the rich that are killed by it: Which indeed can scarce be ascribed to any other cause, then that because of their Poverty and Country way of Living, they have scarce Power to hurt themselves by a more accurate and delicate Regiment. ¶ In the year 1680. the Small Pox were Epidemical at Geneva in the Winter. There died to the beginning of the Month of January, 1681. Young and Old, an hundred and eleven. In the Hospital forty Boys had them, and only one or two died. Although I would not at all detract from the Physician's Skill, yet I adhere rather to the former reason, for that they were committed to Nature, observing no accurate course, only taking a Decoction of Harts-horn and Lentils. I had some under my Care, whom I saved by the benefit of the foresaid Method.

Idem.
p. 199.

XXI. But this Disease has killed more of the common People, since they learned the use of Mithridate, Diacordium, Decoction of Harts-horn, &c. than in Ages more unlearned indeed, but far wiser: for now there is not a House, where there is not some one foolish, pragmatical Woman or other, which practises that Art, to Man's destruction, which she never learned.

Sydenham.
ubi prius.
p. 200.

XXII. But if the Small Pox Flux, the case is hazardous: for I reckon, this sort is no less different from the other, than the Plague is from this, although among the Vulgar, who take Names and Words for Things, the Cure of both is said to be alike. In this sort of Disease, since it is the product of a more intense inflammation of the Blood, greater care almost must be taken, that the Patient be not heated. But although this sort in its own Nature require greater cooling than the other; yet, to promote the swelling of the Face and Hands (without which the Patient is lost) and the rising and increase of the Pustules, and because the Patient, by reason of his painful Exulcerations, cannot keep up from his Bed, it is expedient that he keep both himself and his Hands in it, so he have not too many Clothes, and have but the liberty of turning his Body to any part of the Bed, as he please, as we mentioned in the distinct kind: Especially toward the latter end of the Disease, when the Fever of Maturation is at hand, the Patient may not only not be deprived of this Liberty, but he must be put in mind to use it, and he must be turned night and day frequently, that the great Heat may be qualified, and Sweats may be avoided, by which the gentle Humor is carried off, wherewith the Small Pox, should be diluted, that they may grow Mild.

Idem.
p. 200.

XXIII. If a Salivation come upon this Disease (as it is often observed to happen in grown Persons after a hot Regiment and Cordials) we may hope well. Many certainly, who have been so handled, ascribe their Health to this Symptom: For the Disease being diverted from the natural way, by which it tried to purge itself, attempts this new one, by Salivation; and therefore thence forward less care need be taken for the Pustules, but Spitting

Spitting must chiefly be regarded, and we must take care, that it proceed in a laudable manner. You must also have a care, that you do not any way hinder or disturb Salivation. Wherefore abstain from Gargarisms, upon what pretence soever; by using of which I have observed sometimes that Death has been caused, while they hindered the Spittle, that would otherwise have passed. I would here only use small Beer a little warm, with which, if need were, the Patient's Mouth may be washed.

And seeing Salivation constantly accompanies this sort, which since it is one of Nature's principal evacuations, and serves instead of that which ought to have been made by Pusules (which evacuation indeed by Pusules in this low and depressed sort proceeds not so well as in the other) we must earnestly endeavour, that the said Salivation may continue and be kept up in its vigour, and not be stopt before its time, either by the use of hot Medicines, or by keeping the Patient from drinking small Beer, or some such other Liqueur. Now since the manner of Salivation according to Nature is, to begin with the first coming of them out, and to abate on the eleventh day, but not to give over altogether as yet for a day or two; if it wholly cease before that day, the Patient's case is dangerous. For seeing the Swelling of the Face (by which a little of the Morbifick matter is evacuated) does ever disappear on that day, if Salivation also withdraw, it self at the same time, the Patient is infected with the Variolous matter, which now putrefies, as with Poyson: And seeing now there is no part more, by which it may be evacuated, he is at death's door, unless perhaps (as sometimes it falls out) the swelling of the Hands, which as it shows it self later than that of the Face, so it goes away more slowly, be of that moment, as to save him from the Gates of Death. Salivation, which is here so valuable and so necessary, is very much promoted, if the Patient have store of small Beer given him, or some such other Liqueur, as may neither heat him, nor provoke him to sweat.

XXIV. Besides, that this violent ebullition of the Blood may be quieted, wherein this sort of Small Pox far exceeds the other, and that Salivation may be kept up (to wit, the necessary evacuation of this Disease) Narcoticks are convenient above all other things whatever: Which, for the incrassating virtue that is in them, though they may seem to hinder the bringing up of Phlegm, yet I have long since quit my self of that prejudice, and have made use of them in this Disease, the success ever answering, so the Patient were beyond pubescence: For since the Blood of Infants and Children does ferment more gently, it wants no such cooler, and moreover a Loosness, which nature has appointed to be an evacuation for Children in this sort of Disease, is by the use of them stopt, to the Patient's damage. But Paregoricks, if they be frequently used, bring these advantages with them. 1. By heating moderately they restrain and prevent the too violent ebullition of the Blood, and thereby a Phrensy. 2. By the use of them, the Swelling of the Face and Hands, which nature has as a chief evacuation in this Disease, comes on the better. 3. The Swelling by means of Narcoticks is kept up and protracted to Nature's due term, which conduces much to the Patient's safety, seeing oftentimes the swelling of the Face falls sooner, to the endangering of the Patient: For when the heat of the Blood is qualified, the inflamed particles are opportunely carried to the Hands, Face and all the superficies of the Body, according to the nature of the Disease. And then Salivation is promoted by them, which though it may be stopt in some for a few hours, by virtue of so strong an incrassating Medicine, yet strength being presently increased by this new Aid, Nature rowzes her self, and finishes what she began, with success. Nay, I have

observed, that Salivation, which usually abates about the 11th day, and sometimes sooner, to the Patient's great hazard, has upon giving Paregoricks more than once been renewed afresh, and has not ceased before the fourteenth day and sometimes after it. I usually give either about 14 drops of Liquid Laudanum, or 6 drachms or 1 ounce of Syrupus de Meconio, in Cowslip water or some such distilled water; Which if they be given to grown Persons, after the Small Pox are all come out, every Night till the end of the Disease, I have found by experience, that not only no inconvenience, but great benefit will accrew to them from thence. But it is expedient, as I think, to give the Paregorick a little sooner than otherwise is usual; for you may easily observe, that in the worst Small Pox the Paroxysm of heat, as I may call it, does usually torment the Patient with restlessness and other Symptoms, which if the Paregorick be taken about 6 or 7 a Clock in the Evening, may be in some measure prevented.

XXV. Moreover, since in the Confluent Small Pox a Loosness does as certainly follow Children, as Salivation does the adult, Nature always appointing one or the other of these evacuations, to carry off the Morbifick matter; as on the one hand I never give a check to Salivation, so on the other I do it not to a Loosness, since both are equally absurd. The ill bestowed pains of several imprudent Gossips, has murdered many Thousands of Infants, while they falsely reckon with themselves, that a Loosness is as dangerous in this sort of Small Pox, as in the other that is distinct; Not knowing, that in the distinct a Loosness does hurt, where evacuation is made by the Pusules, but that here it is Nature's work, seeking a pass for the Disease. Letting alone therefore the Loosness, *ἢ τὴν φουρτίαν*, according to Hippocrates his rule, *συμμετέλλειν*, (and we must work with Nature) I proceed as I begun, and advise them to lay the Children sometimes in the Cradle, sometimes to take them up; and, if they be weaned, I order them the same Diet, as I did grown Persons before.

XXVI. If in the distinct kind, by reason of an over hot regiment, and continual Sweat, the Face do not swell (Pusules in the mean time appearing very thick) but be flaccid, and the interstices of the Pusules be pale; in this case, because I would do my utmost for a more temperate regiment, and to check the fury of the Blood, I immediately order some Paregorick to be given: Which indeed (unless the Brain be over heated) by gently causing Sleep, and thereby checking the Head-strong rage of the Blood, it seasonably determines the Blood together with heat to the Face, as the nature of the Disease requires.

XXVII. But if the mischief coming from this cause proceed so far, as that Sweat, which hitherto ran plentifully, does cease of it self, if the Patient fall into a Phrenzy, make little water and often (because death is at hand) I think the Patient can be relieved by no other means, then by taking away a great quantity of Blood from his Arm, and exposing his Body to the open Air. And indeed, what I have now proposed, seems not so rash and unreasonable, if we consider, how some have got out of death's Iron hands, by Bleeding plentifully at the Nose. This moreover is to be considered, that in this extrem Agony, they are not in danger of death, because the Pusules go in (for they are out and very red, when the Patient is at his last gasp) but because the Face does not swell. Now to promote this swelling of the Face, whatever it is, that conduces to temper the Blood (and I suppose none will deny, that Bleeding and moderate refrigeration has this virtue) it must of necessity do good, as well as the use of Paregoricks, and for the very same reasons.

XXVIII. I would not have this understood, as if in every Phrensy, coming in the Small Pox (since no one Symptom is more frequent than this) I would advise Bleeding immediately; but in that only, which therefore comes, because the Face does not swell, that is, in the distinct kind, and where Pustules appear plentifully enough: Or, when by reason of a very hot regiment, and use of Cordials, the Blood is so fierce, and above all measure exalted, that it will not give time, till it may be reduced to a due temper by paregorick Medicines, and others conducing to the same. When the case stands thus, the Physician, governing himself rather by conscience, than by uncertain fame, ought either to take away Blood, as is said before, or order his Patient to be refreshed with the open Air: To effect which, it seems sufficient to me, that the Patient rise a little while from his Bed, by which means I have saved several from death. Besides these things which I have seen with my own Eyes, there are innumerable instances of Men, who by these means have been delivered from the jaws of Death. For some Phreneticks having escaped their Nurses guard (and men so affected use wonderful shifts) have got out of their Bed, and been exposed to the cold of the Air, in the Night. Others either by stealth, or by snatching, or by entreaty, have got cold water of their Nurse, and drunk it, and so by a happy mistake have obtained their health, which was despaired of. Here I shall produce one story, which I had from his own Mouth, whose the transaction was. Which is this; This young man in the flower of his Age went to Bristol, was taken there with the Small Pox, and a little after them with a Phrensy. The Nurse having occasion to go into the City, left the sick Man to other folks care, till she came again presently. But while she tarried a little longer, the sick man (as the by-standers thought) in the mean time dies. The by-standers, considering both the time of the year, and the habit of his Body, which was gross and corpulent, that the Body might not stink, they lift it out of Bed, and lay it naked on the Table, throwing a Sheet over it; The Nurse at length coming back, and hearing the sad news, enters the Room to behold the sad Spectacle; she presently threw off the Sheet, and looked on his Face, and she thought she discerned some obscure signs of Life, therefore she presently laid him in Bed again. And the man recovered in a few dayes.

Idem.
p. 209.

XXIX. If in the confluent Small Pox the Spittle be so baked and tough by the preceeding heat, that the Patient be almost strangled (which is not usual on the eleventh day) a Gargarism must of necessity be used, and order must be given to Syringe the Throat often with it Night and Day. Let it be made either of Small Beer, or Barley water with Honey of Roses. But if the Patient have been treated as he ought, Salivation, even when it begins to abate, will do its office so well, that there will be no need of this Remedy. And truly, when it is come to this, that the Patient is in danger of being choaked every moment, quite dunned, and his Breath almost gone, we cannot safely trust this Remedy. When the Patient is thus at his last cast, I have sometimes very seasonably and successfully given a Vomit of Infusion of *Crocus Metallorum*, but in something a larger dose, to wit, 1 ounce and an half, because, by reason of the extraordinary stupidity, which the Patient labours under, a less dose will not work at all, and in the mean time, by disturbing the Humours, which it cannot carry off, will put the Patient in great danger of his Life.

Idem.
p. 110.

XXX. By this same tempering of the Blood I have seen purple spots removed: but neither by this nor any other Method could I ever see either pissing of Blood or a violent eruption of it from the Lungs stop as yet: but both these Hæmorrhagies,

as far as I could hitherto observe, do undoubtedly preface death.

Idem.
p. 211.

XXXI. In suppression of Urine, which sometimes takes the younger and brisker sort (from the great confusion, to wit, and disorder of the Spirits, which serve for the voiding of it, by reason the Blood and Humours are disturbed with too great heat) I have taken all the tribes of Diureticks to my assistance, but nothing succeeded so well with me, as to take the Patient out of his Bed, who being supported by some that were by, when he had walked twice or thrice cross the Room, presently made store of Urine, to his great relief.

Idem.
ibid.

XXXII. But the Symptomes, which proceed from repercussion of the Variolous matter by external cold, or evacuation unduly made, they must be removed by the use of Cordials, and a regiment conformable; which yet must not be continued beyond the time that the Symptomes continue; The chief of them are depression or falling in of the Pustules, and a Looseness in the distinct Small Pox: For in the Confluent neither does the depression of the Pustules forebode any ill, because it is the nature of the Disease; Nor a Looseness in Children that are sick of them, because it causes health and no danger. In both these cases a Cordial Potion of some proper distilled waters, with *Diaferdium*, *Laudanum liquidum*, &c. may very well be given, and that not only to remove the foresaid Symptomes, but at any time of the Disease, if the Patient complain of a pain at his Heart, and sickness. And indeed I think, the redness, which is so much upon the often striking in of the Pustules, arises hence, because they who have observed the depression of them in the Confluent sort, have taken it for a recess of the Variolous matter upon taking cold, when it is nothing but the nature of the Disease: And they suspect the same in the distinct kind, because, to wit, they expect the coming out and increase of the Pustules before their time; whereas they have not taken notice of the time, when Nature uses to bring this fruit to maturity.

Idem.
p. 212.

XXXIII. When the Patient is upon recovery, and the Pustules are falling, when the Patient has eaten Flesh a few dayes, namely about the 21th day, I reckon he may be bled in the Arm, if the Disease have been violent; since the Inflammation, which the Small Pox has impressed on the Blood, whether the Patient be old or young, does no less indicate Blood-letting, than the filth, which has then been gathered, does purging: which is evident enough, both from the colour of the Blood, which, when taken after a violent Small Pox, is like that of Pleuriticks; and also from those great Inflammations, which after this Disease fall upon the Eyes; and also from other dire effects of Blood over heated and depraved by this Disease. Which is the reason, that they who lived very well in health all their time before, do all the rest of their Life after conflict with hot and sharp Humours, falling upon the Lungs or on some other part. But if the Pustules be few, there will be no need of Bleeding. After Bleeding I give two or three Purges.

Idem.
p. 213.

XXXIV. The Epidemick Measles which came in the year 1670, and they that were abroad in the year 1674. introduced black Small Pox, whose Pustules were as black as foot, that is, when they fluxed, and the Patient died not, till they came to maturity, for before they were ripe, they were only of a brown colour. Moreover the Pustules were very small, if they were numerous (for when they were but few, they were not less than in other kinds of Small Pox; and very seldom Black.) A great Putrefaction was latent in both, of a thick and incoëst nature. When they were ripe they smelled very ill, so that when People were very bad of them, a man could not come near them for stench. They finished their course slowly, and stuck

stuck longer on, than any that I ever yet saw. This is worth observation, that how much more gentle the Disease is, so much the sooner the Pustules ripen, and the Disease comes to an end. So in the regular sort of Confluent Small Pox, which came in the year 1667. the 11th day was the most dangerous, which once over, there was no further fear usually of the Patient. In the irregular sort of the Confluent next following, which came in the beginning of the year 1670, the Patient was in greatest danger on the 14th or at furthest the 17th day, which if the Patient got over, he was safe: But in this sort of Confluent Small Pox the Patient died even after the 20th day. And sometimes, if he did recover, not only his Legs swelled (which indeed is usual with some in the Confluent Small Pox) but his Arms moreover, Shoulders, Thighs and other parts; which Swellings begun the Tragedy with intolerable pain, just like that of Rheumatick Persons, afterwards they often suppurated, and ended in great Sinuses and Imposthumes of the Muscular parts.

And these Small Pox seem to me a new kind, arising out of the former, then grown old. Although the Black Small Pox, which in the beginning of the year 1670 first showed themselves, according to the disposition of the Air, which made it Epidemical, did go on towards the height, yet like the relapse of some Disease, the old matter fermenting again, the Air which inclined to the production of the Small Pox, drew them out of their old store: which Disease indeed gathering strength anew seemed as it were to revive. And these were so much the more irregular, and showed so much the more intense putrefaction, by how much the matter, of which they were bred, was more thick and saculent.

As to the Cure, I have admired at the quite contrary Indications, which this Disease seems to intimate to me. For on the one hand it was clear, that the Symptoms, which depend upon too great Inflammation, were immediately produced by a hot regimen, as a Fever, Phrensy, Purple Spots, &c. to which this Disease above all other is subject: And on the other hand an over cold regimen did hinder the Swelling of the Hands and Face, which is here very necessary, and render the Pustules more flat. After I had much and often revolved these things anxiously with my self, I at length understood that it was possible to help both these inconveniences together at the same time: for by allowing the liberal use of water boyled with Milk, of small Beer, or of some such other Liquor, it was in my power to check the internal rage of the blood: and on the other hand by keeping the Patient constantly in bed, not putting out so much as an Arm, I could by the gentle heat thereof promote the elevation of the Pustules, and the swelling of the face and hands. Nor is this Method inconsistent with it self, for the blood, when the eruption is at an end, is reckoned to have discharged the inflamed Particles into the habit of the Body, and not then to want provocatives to a further secretion of the matter: so that since then the whole stress of the business lies in the habit of the Body, and in ripening the Abscesses, we must only take care on the score of the blood, that it may be preserved from hot Vapours, struck in from the flesh beset with Pustules, and on the score of the Pustules, that they may be brought to maturity, by the gentle heat of the external parts. But then, how happily soever this Method of mine had succeeded in other Confluent small-Pox, yet in these of this Constitution my Method failed me: so that most of these, that were very ill of them, died, whether they used the Method now recommended by me, or a hotter Regimen and Cordials. Therefore I fully

understood, that something was yet wanting beside these things, which might conduce either to the checking of ebullition of the Blood, or to raise the Pustules, and the Swelling of the Face and Hands; that is, that something was wanting, which might be sufficient to conquer an intense Putrefaction, which was observed to be higher in these than in any other. At last Spirit of Vitriol came into my mind, which I thought might satisfy both intentions, both the resisting of putrefaction, and stilling the rage of the Blood. Wherefore leaving the Patient to himself, till both his pain and inclination to Vomit, which use to go before eruption, were ceased, and all the Small Pox were come out, at length on the 5th or 6th day I ordered Spirit of Vitriol to be dropt into small Beer, to a moderate acidity, for his ordinary drink, to drink his pleasure; but more freely, when the Fever of maturation was at hand, which drink I ordered him to take every day till he was perfectly recovered. This Spirit, as if it had been Specifick for this Disease, did check all Symptoms, to a miracle: The Face swelled sooner and far higher: The interstices of the Small Pox inclined more to a red colour like a Damask Rose: The small Pustules grew great, at least as big as that sort would bear: The Pustules also, which otherwise had appeared to be black did here discharge a certain yellow matter, resembling an Honey-comb: Then the Face was instead of black tinged with a deep brown colour: They ripened sooner, and run through all the other times sooner by a day or two. And all these things came to pass, if they drank freely of the foresaid Liquor: Wherefore whenever I observed that the Patient refused to take a quantity sufficient to conquer his Symptoms, I gave him now and then this Spirit mixt either with some Syrup in a spoon, or with Syrup and distilled water added to it, that the more sparing use of this Liquor might be compensated. I have reckoned up the divers conveniences, of this Medicine, Inconvenience indeed, I could never yet observe any the least arise from it: for although Salivation be usually stopt on the 11th or 15th day by it, instead whereof some fools about that time do serve, yet the Patient will be less endangered by these, than by it: because they that are sick of the Confluent Small Pox, are chiefly in danger, because in these dayes the Spittle being made viscid, choaks a Man, which indeed a looseness in this case helps, which will either cease of self, or at least, when there is no danger from the small Pox, it may be stopt by drinking Milk and Water, and by taking of Narcoticks.

In the mean time the Patient being laid in his Bed, and his Arms covered, I would not suffer him to have more Clothes on him than ordinary, I allowed him also to move himself from one part of the Bed to the other, as he pleased, to prevent Sweats, to which he was much inclined, notwithstanding this Remedy, in the mean time he lived upon Oat-meal and Barly grewel, and sometimes a roasted Apple. Towards the latter end, if either the Patient were faint, or sick at his Stomach, I indulged him 3 or 4 spoonfuls of Canary Wine. And after the 5th or 6th day, I ordered him being a grown Person (for Children had no need of it) a Pategorick draught to be taken every Evening betimes, that is 14 drops of liquid Laudanum in Cow-slip water. On the 14th day I suffered the Patient to rise from his Bed, on the 21th I got him let Blood; and then I purged him twice or thrice; which being done, the Patient's Face looked better and of a more lively colour, than theirs used to do, whom this Disease had handled ill. Besides, the method here recommended does not suffer the Face to be disfigured with Scars, which proceed from hot and enraged Humours eroding the Skin.

Sydenham

XXXV. The Small Pox must not be neglected, but an exact account must be taken of them, and a solicitous care must be insisted on. First, when they are Epidemical; and one or more Children are taken with them in the same House, and there are more yet, that have not had them, and indeed for prevention sake from so grievous and difficult a Disease. 2. Upon the account of them, in whom, while the Fever is urgent, the Humour that produces the Small Pox is moved up and down the Body with the Blood. 3. When Spots and Pustules are come out all the Body over, and they begin to be inflamed, and to hasten to suppuration. 4. When the same Small Pox are in suppuration or cease to suppurate. 5. When signs remain of a Humour that produces the Small Pox, not sufficiently expelled, and changed into Abscesses, and so remaining in the Body, and threatening new Mischief. 6. And lastly upon account of other grievous Symptoms attending them, as an Inflammation in one or both Eyes, or of the Small Pox observed in the Eyes, difficult Breathing, and a Cough both dry and moist, and Tumours and Abscesses in divers parts of the Body, especially in the Limbs.

Sylvius de le
Boe.

XXXVI. We must do our endeavour, if any Humours be found in Children to offend either in quality or quantity, that the same be altered and corrected by gentle Medicines, or also abated and carried off, to the end that if the Small Pox come, they may give the less trouble, and be the more easily overcome. These Medicines both alterative and purgative, according to the diversity of Humours must be divers and grateful, that Children may more easily take them: for it is good for Children to continue in the use of them for a pretty while: for by this means it comes to pass, that the gentle and kindly Small Pox, which then appear, become yet more kindly, and easie to be cured. And as soon as Children have any Fever, or Head-ach, Cough, Vomiting or Loosness, whether others are sick of it in the same House, or they are observed to be Epidemical only in other places, the prudent Physician must diligently observe, what Humours then chiefly offend, and which way they incline, whether to Vomit, or Stool, or Sweat, to the end Medicines proper for each may be prescribed, and that their motion, and useful evacuation being observed, may be promoted. For we must take care, that if Blood abound in any, who can bear Bleeding, it be insisted on immediately. Nor must we stop here, but rather if the Patient's Disease, and his Fever especially will bear it, not only the same day, but an hour sometimes after Bleeding, either a Vomit, or Purge, or Sweat may be given, whenever an inclination to Vomit, or to go to Stool, or a disturbance of the Belly, or Sweat, perswade what should be done; to the end that part of the peccant Humour, which would afterward stick in the *Superficies* of the Body, and cause the Small Pox, may be wholly expelled from the Body, and therefore of necessity the Small Pox must be rendred more kindly and few. Among Medicines to be then used, from experience I commend Antimonials above all other things, both because they have an excellent virtue in cleansing the Blood from any noxious Humour; and because oftentimes they can satisfy several Indications, and according to the occasion and desired operation, they can discharge the noxious Humours by several ways. Nor is it sufficient to give them once, sometimes we must repeat the same for several dayes, till as well the Fever as the other Symptoms be removed, or at least notably abated, upon which the Small Pox use not only to be far fewer, but much more kindly, nay oftentimes I have observed in my Patients the Small Pox voided by Stool, to their great relief.

Idem.

XXXVII. Whoever would cure the Small Pox and Measles in a true and secure method, it is necessary, that he diligently observe and distinguish three especial times of the Small Pox: The first of Ebullition: The second of Apparition: The third of Suppuration. In the time of Ebullition it is dangerous to trouble the Patient with powders of Bezoar alone, and other hot Alexipharmacks, except they be very temperate and a little Astringent; to this end indeed, that the Mass of Blood may not be too much disturbed, nor all of it so soon infected with the base contagion, whereby Nature is forced to the Battel before her time, and vanquished. I know besides, that most dangerous Loosnesses, usually mortal in these Diseases, have followed such unseasonable disturbing of the Humours. I know, that the Humours are so sharpened with such hot things (especially if they were thin before) that being rendred more biting, they have caused a great Itch in the coming out of the Small Pox; so that upon the least rubbing the Skin would come off and bleed, not without an offensive smell, which gave no vain presages of ill luck, to the Physicians there present, and the event a little after shewed that these things were the *prælude* of a following Gangrene, livid and purple Spots following upon the 9th day of the Disease. Wherefore *Avicenna* said well *l. 4. f. 3. tract. 4. cap. 6.* that black and ulcerous Pustules appearing in Children were mortal; Because the turgescence of the fermenting Blood is sometime so great, that it is not only carried as it were in a rage to all the parts, but an exceeding contagious poyson does also thence arise. So *Philipp Salmuth cent. 1. obs. 35.* and others, have seen fatal abscesses in the Small Pox upon the Limbs. For, sayes he, when the Ebullition is too great, and very violent, it makes the Blood in a manner mad, as *Hippocrates* speaks, then it moves from place to place, and gets especially into the Limbs, as the more Bloodless, and therefore weaker parts: The same *Phil. Salmuth cent. 2. obs. 50.* has observed that sucking Children, taken with the Small Pox, have been the cause of their Mothers having very Malignant Ulcers in their Breasts. At the time of Apparition we may more safely use drivers out, especially if Nature seem slow. Frequently, where there is no need of strong expulsion, I am content with some comfortable Alexipharmack water, of which I give now and then 2 or 3 spoonfuls, and often in a day, that Putrefaction may by little and little be resisted, and that Nature successively assisted may be strengthened, for example; Take of water of *Scorzonera*, *Fumitory*, *Borage*, & *toro Citri* each 1 ounce, add about 1 drachm of some Cordial powders with *mannus Christi perlatæ*.

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4.

Since the Course of this Disease has three times, which are as so many distinct Goals, the curative intentions should be accommodated to each of these. As to the first, that is, of Ebullition, the Intention is, that all impediments may be removed from nature, to the end the Blood, infected with the ferment of the Small Pox, and apt to be coagulated, may still keep an equable motion in the Heart and Vessels, without stagnation; and while it ferments, may expel the congealed portions with the Venome. In the mean time our care must be, that the work of Fermentation or Effervescence may no way be hindered, or too much put forward: for by this the mass of Blood is put more than it should into congealed portions; by the former it is restrained too much in its motion, and the Poysonous particles with the congealed Blood, are not thrown off. Nature is usually hindered in the work of Secretion and Expulsion, by too great a mass of Humours in the Bowels, or abundance of Blood in the Vessels: Wherefore at the very first coming of the Disease, we must do our endeavour, that

that Evacuation may be seasonably procured by vomit or stool, if there shall be need: therefore we must use gentle Medicines only, which may not irritate or disturb the Humors: Bleeding also may be celebrated with good success, if there be a *Plethora*. In the meantime a thin and moderately cooling Diet may be used, as Barly grewel, Oat-meal Caudle, small Beer and the like. Flesh and Broth made of it must be avoided, by such whose Blood is more inflamed than it should, by reason of abundance of sulphureous Fewel: All cold and acid Things do harm, for they congeal the Blood more, and by their adstriction contract the Mouths of the Vessels, so that the Small Pox cannot come out freely: Also hot Things and Cordials must be cautiously used; for the Blood and Humors are too much disturbed by these, and put into confusion. As to the time of Apparition, we give 3 things, as a constant rule in charge to all that are sick of them, namely, That a gentle and kindly transpiration be still continued in the Blood, and that the Throat and Eyes may be preserved from too great an Eruption of the Small Pox. Besides these, some other Symptoms are sometimes troublesome, which must be timely prevented with proper Remedies: Sometimes there is Watching, Phrensy, Bleeding, Vomiting, Loosness, striking in of the Small Pox: A prudent Physician knows how to take care of these and any other, as there shall be occasion: In which nevertheless there is need of great caution, lest, while we take care of small things, the main work of Nature be interrupted with the trouble of too many Medicines; For all this time there is only one continued *crisis*, therefore nothing must be lightly moved. The utmost diligence and circumspection of the Physician and attendants is requisite when this Disease is at the height, lest the Small Pox being all come out, and at the fullest, might hinder Transpiration; for then the Patients are in danger of the return of the Fever, and of the restagnation of the malignant Matter within; one whereof while we study to prevent we often cause the other. 3. When the Disease is in its declension and the Small Pox begin to dye and grow crusty, the danger is usually over, and the Physician has not much to do. The sick Party must as yet be content, though he be very hungry, with a thin Diet, without Flesh. If the Pustules be long in falling off, we use to hasten their fall with Liniments and Epithemes, which prevents their pitting. When the Small Pox are gone, and the Patient is able to rise and walk round his Chamber let the filth and excrementitious Matter, left in the Bowels and Blood, be carried off by a Purge twice or thrice repeated; and then he may be allowed to fare a little higher.

XXXVII. Whether the Small Pox and Measles may immediately in the beginning, and when they are yet but breeding, be suppressed with safety to the Patient, so as not to encrease or come to the height? Or, at least, may they be so prevented, as never to come? *Augenius lib. 10. de febris cap. 1.* concludes this question with a distinction affirming, that preservation from some Small Pox is safe, from others not safe. "For, he says, that Small Pox coming in a pestilential Constitution are so pernicious that they kill all they take, therefore we ought to do our utmost, that they may not come. Nor truly do these come from a good *crisis* of Nature, but from a pestilential Air, whose great Malignity we may sometimes hinder, and sometimes qualify. But there can be no preservation from a kindly Small Pox; nor if there could, were it safe because no Skill can amend the intrinsic Pollution contracted in the solid Parts from the principle of our Nativity. Whence you may

gather, that *Augenius* in this preservation of his has respect rather to the pestilential Contagion and fatal Malignity of the Air, than to the Small Pox themselves, as such, because they cannot, nor ought not to be absolutely prevented: Especially because as *Fracaflorius l. 2. de morb. contag. cap. 2.* shows well, and as all Physicians agree; This Ebullition is a kind of purification of the Blood, wherein the Blood is defecated by a certain *crisis*, as it were, made by Nature.

XXXIX. Towards the latter end of last Autumn, at which time the Small Pox began, and continue up and down the Country to this very day, being called to a Boy about ten years old, who had been ill of a Fever with a violent Head-ache and scarce any other Symptom for two dayes, and suspecting a little what the Matter was, I advertised his Parents of my Suspicion, who were of a contrary Opinion, imputing the matter to Worms, and they earnestly entreated me to give him something for the Worms: and being tired out with their Importunity, I consented at length; yet I considered with myself, that I must not rashly give a Medicine, which might increase the Fever, or stop the Small Pox: therefore having made a Pill of 10 grains of *Mercurius dulcis* and a little Conserve of Roses, he took it in the Evening long after Meal, and the next day innumerable Pustles appeared, to the relief of the Patient. Not long after a Girl six years old, being taken with a Fever, not very acute, but with convulsive Motions and frequent reaching to Vomit, and being believed to be thus ill because of Worms, which she had lately voided; upon taking a few grains of the said *Mercury* in a Pill, she voided abundance of Small Pox the next day, which I admired. ¶ The mention of the Small Pox puts me in mind how commendable *Mercurius dulcis* is in the Small Pox: Perhaps as it is an enemy to Worms, so to all animated Corruption, as by the help and upon the credit of the Microscope, our modern Philosophers conclude in malignant Diseases. I have observed, that this Medicine, if it be given in the beginning of a suspected Disease, has either perfectly preserved, although others in the same House were infected with the malignity of the Small Pox, or at least freed them from an over abundant Eruption. My own Daughter 10 years old seemed in danger of the Small Pox, her extreme Parts were Cold, and then she was hot all over, her Head ached, she reached to Vomit, was griped in the Belly and had running Pains in her Limbs. Then by reason of her reaching, against the perswasion of Physicians, who abhorred Evacuators, I gave her of *Mercurius dulcis* 1 scruple, with 4 grains of Scammony Sulphurate, she went to stool thrice, in the Evening she vomited violently, she slept quietly, and escaped without the coming out of any Small Pox. A little after a Girl about 8 years old, having had the Small Pox here and there, before she was well, was taken with the Head-ache, a pain in her Eyes and Back, &c. So that all reckoned she would have the true Small Pox: Although I was not called at the beginning, yet I gave her the same Medicine, with so much benefit that she had but a very few.

XL. When the first Fever is over, or at least well abated, and the Small Pox are come out, be they more or less, and the Symptoms preceeding and accompanying their coming out are almost removed, then it is good to use diaphoretick Antimony, *Bezoarticum minerale*, or any other Antimonial, that gently causes Sweat, to the end that what is yet mixt with the mass of Blood may all of it forthwith be driven out, not only the superficies of the Body but partly also by the Pores thereof beyond it, and so out of the Body.

Fr Bouchard
Mise. curios.
an. 1672.
Obs. 9.

Sigismundus
Grassius.
ibid. Obs. 56.

XLII. The Cure must be begun with letting of Blood, if the Blood so abound, and the Patient's Age will bear it, and it must be done speedily. Yet if the Physician be not called the first day of the Disease, nevertheless he may very well take away Blood before they come out, or while as yet a few do but appear, which time commonly uses to extend to the fourth day, after being taken with a Fever. In which notwithstanding, diligent caution is necessary: for if when the Pustules begin to come out, the diminution of the Fever and abatement of the Symptomes do follow, it is better to leave the whole affair to Nature's good conduct, which is about sufficiently to drive out all the morbidick Matter to the Skin; Then Bleeding is not needfull, for Experience shows us, that abundance of Children, that are sick of kindly Small Pox, and not oppressed with a *Plethora*, are happily cured without Bleeding. Nay in the said case Bleeding may rather do harm, because the Small Pox are driven out by the ebullition of the Blood, which if gentle, will be much weakened by taking away Blood, and so will become insufficient for freeing the mass of Blood from impurities. But on the contrary, if when the Small Pox come out, an intense Fever, Restlessness, difficulty of Breathing, thick and red Urine, and other violent Symptomes appear, it is a sign that Nature is oppressed with too great a load of Humors, and that she cannot conveniently rule them, and therefore that Bleeding is necessary, to the end that when part of the Burthen is taken away, the rest may more easily be expelled by Nature. In a word, in an Ebullition, which is merely perfective or depurative, Blood must not be taken away; But in a corruptive one Bleeding is very necessary, even in one that has a little malignity in it.

Riverius.

XLIII. Bleeding is so necessary in dangerous Small Pox, in which the Ebullition uses to be corruptive, that the tender Age of Children does not hinder it: for it has been the Custom to make use of Bleeding at four years old and sometimes at three. The Physicians of *Paris* do not forbear Bleeding younger, even in Children that Suck, which yet this tender Age, little Aliment, and plentiful Efflux by the Skin, will hardly allow; Nor can this new Licentiousness of Bleeding be any way defended. In a little more grown Children only one Bleeding sometimes is not sufficient, but it must be repeated, if a high Fever continue, or a *Delirium*, or any other grievous Symptome afflict them. ¶ Therefore when the most Christian King, who was then scarce past his Pubescency, was ill of the Small Pox the *Archiatrorum Comes* (or Count of the principal Physicians) with the joyn't Suffrages of all the rest, ordered a Vein to be Breathed several times; which when it was done with exceeding good success, the Glory of saving a King, and of the conservation of a Kingdom must be ascribed to Bleeding, and to the Physician the Author of it. The King of *Spain's* Physicians, who are prone to Bleed largely, bled their Infanto King not in one but several Veins.

Riverius.

Relinscius.
lib. 2. c. 1.Epiphanius.
Ferdinandus.
lib. 78.

XLIII. When there is an urgency, Blood may be let at any time, if there be but Indicants. For first when the Small Pox and Measles appear, and the Fever ceases not, nor other grievous Symptomes, then we may let Blood. Secondly, when they appear one day and strike in the next, then immediately Blood must be let. Thirdly, when there are other grievous Symptomes, besides the Symptomes of the Small Pox, as a Phrensy, Quinzy, Lethargy, Dysentery, a grievous Ophthalmie, or any other dangerous and grievous affection. And so *Rhases* lets Blood in the Small Pox and Measles, when there is a dysentery. ¶ Yea when the Small Pox have done coming out, which for

the most part is within 9 dayes, if the Fever be very violent, Blood may be let again, and the Patients may be treated, as People in a continual Fever. Riverius.

XLIV. *Hippocrates*, lib. 2. *Epidem.* sect. 3. sayes, that at a certain Season, in Summer Fevers, about the 7th, 8th or 9th day some milieaceous roughnesses, almost like unto Flea-bitings, which yet did not Itch very much, arose upon the Skin, and continued till the *crisis*, which came out upon no Men; and no Women, who had them, died. These roughnesses, of which *Hippocrates* speaks, are none of that sort of *exanthemata*, (or breakings out) which began to appear in malignant Fevers in our Age, but rather of the sort, which we call *Rosalia*. And they are bred, as I think, of a bilious and ferous Matter, when some Portion of a salt Matter is mixt with it; which Juices indeed are separated from the mass of Blood, upon a certain Ebullition rising therein, and they appear most in Women and Children, because they abound most with the foresaid Humors, and are of a thin texture of Body, in respect of Men. The Romans call this Disease *Rosalia*, very usual among Children, so that none, as they think, can escape these any more than they can the Small Pox. These roughnesses are not unlike them we call *Sudamina* (or Sweat Blisters) wherein the Skin is swelled and rough, with Itching: Although these are a little larger than *Sudamina*: And indeed they are very like those Eminences, which come upon the bitings of Fleas, which does not happen in fever Spots, wherein the Skin is smooth, and only vitiated in colour, although *Vallesius* and others interpret *Hippocrates*, of the fever Spots, or *Petechie*. Children are first taken with an acute and burning Fever, on the third or fourth day, after little red Spots begin to break out, which are elevated by degrees, and make the Skin rough; and the Fever continues till the fifth day, as which ceases, these roughnesses by degrees go off. Vulgar Physicians take this Disease for the Measles, though they differ very much; for the Measles and Small Pox kill many: But Experience shows us, that scarce one dies of the *Rosalia*, and not but by a miracle, and through some great Errors which the Sick commit, or the Physicians chiefly, in letting of Blood. For since this Remedy is in all respects contrary to this Disease, because childhood, whereof this is a peculiar Disease, does by no means admit it; and since it is utterly prohibited by the nature of the peccant Humor, which is bile, and by its motion outwards; And the Disease, which is wholly salutary does not require it: No wonder therefore if a Remedy, so unseasonably administered, sometimes do so much hurt, that of a salutary Disease it becomes mortal.

Prosper Martianus.
commun. in
loc. cit.
p. 245.

XLV. (a) Some Physicians are very timorous in letting of Blood, fearing that Nature's endeavor may be disturbed; and that a retrocession of the Humors from the outer to the inner parts of the Body, may follow. But *Caldera Trib. Medic. lib. de Variolis cap. 9.* does learnedly remove this Scruple. "Nor need you fear, says he, the striking in of the Small Pox upon this letting of Blood, because of a vacuum; for this fear has place only, where nothing superfluous is left in the Body, and Nature works critically, all the Matter being driven out of the Veins (for then we must wait the motion of Excretion) but not when irritated Nature drives out Symptomatically, and while opposition to the evacuating Remedy remains still in the Veins, namely Abundance, which you should well weigh in an equal ballance. Reason is backed with Experience whereby we find, that when, after Bleeding in the Small Pox, the heat of the Blood is abated,

red, the Humor is better concocted by Nature and turned into good pus. But even Nature herself, the Physicians best Mistress, oftentimes prevents the Physician, by letting Blood plentifully at the Nose, that she may make the way more easy for the Measles or Small Pox, and the sooner extinguish the burning Heat. And we must confess that some Physicians are sometimes over timorous, and more intent how they may avoid the obstructions of the vulgar, than they are upon the reason of things, and some, though they know better and approve it, yet for other Folks sake they follow Custome. Say not, that Vomiting hinders Bleeding. ¶ (b) Concerning Vomiting hear *Caldera loc. cit.* "Nor let Vomiting affright you from letting of Blood, nor a Loosness, if it be not profuse, nor a Catarrh, nor pain in the Belly, nor Shivering, because these and many other complicated and various Accidents use to go before the coming out of the Small Pox, which, you may stop after Bleeding, or Cupping, scarified or dry.

XLVI. Far less need any question be made about the Winter Season; Sickness, at what time soever it comes, requires a Cure and a Removal, so much the sooner, by how much the more grievous the Disease lies upon one.

XLVII. The often repetition of Bleeding is not absolutely necessary, when it has been done once or twice, if expedient, (because it hinders Nature's motion, which drives out) unless drowziness, or strangling with a Fever, or a Dysentery, for the most part Mortal, do force us upon this Remedy: We must not neglect frequently to apply young Pigeons split, to the Feet, Hands, and Heart: We must set Cupping-glasses all over the Body frequently, with gentle pricking: A little Bathing in warm Water, when the Season would bear it, has brought them out. ¶ In the year 1676. I had under Cure the Excellent Mr. Alexander Diodati, a Noble Youth of the illustrious Family of the *Chab.ij* 17 years old. The Small Pox had come out, and were then well towards ripening, when a gentle Loosness came: The Pus- tules immediately struck in, and a phrenitick Delirium followed. Nothing would serve the Women (who have all the Skill in Physick) but the giving of some Alexiterial Powder. I was for letting Blood in the Foot, which was done, much against their Wills; hereupon immediately all things were quiet, the Pus- tules rose again, and he quickly recovered.

XLVIII. The place for Bleeding is various among Authors: Most commend the common Vein, and I do the same in such as are above 14 years old, and are Sanguine and strong: But I had rather let Blood in the lower parts, and in the Hemorrhoids especially in Melancholick People.

XLIX. Then the manner is various, by opening a Vein, by Cupping, and by Leeches: And I seldom use to open a Vein, but rather cup, or apply Leeches, and especially in Children, in whom if I cannot use Cupping-glasses, yet a Leech or two may be set on, which will do the same thing.

L. I usually apply Cupping-glasses to all, especially to the Loins, Buttocks and Hams, and I do not only this before they come out, but after they appear, seeing this conduces very much to draw the matter to the out parts.

LI. It is convenient that we know, while the Small Pox are appearing we may Bleed more boldly (because they are the product of greater plenitude) than in the Measles, which rather proceed from the Malignity of the Humors: Therefore in the Measles it is better to use Cupping than Bleeding, unless in adult Bodies.

LII. If opening a Vein be suspected, because of tender Age, or because the proper time is over, the redundancy of Blood may be taken away by Cup-

ping and Scarifying the Back, Thighs and Shoulders: Which also may do good in the state of the Disease, seeing the motion of Nature from the Center to the Circumference is promoted thereby. But care must be taken, that Scarification be not made deep in Children: for sometimes it happens, that when an imprudent Surgeon has thrust his Knife deep in, hot boyling Blood upon cutting the Veins, has come out at the wound with that violence, that it has been a difficult thing to stop it.

LIII. Although Purging be suspected in this Disease, because it causes a motion contrary to that of Nature; wherefore whoever have a Loosness in the Small Pox, a sudden striking of them in and Death usually follows: yet take notice, that a Purge is often beneficially given before the Small Pox come out, and the Fever grow high, that is, when Children are in a neutral state of decidence: for then, if *Cacochymy* abound, it is good to diminish it by purging, that Nature afterwards may more cheerfully undertake expulsion. But when the Small Pox begin to appear, a Purge would be pernicious: And also when there is great Malignity, as in an Epidemick constitution, when many Children dye of that Disease, it is best wholly to abstain from Purging; because in very malignant and pestilential Diseases, it is very hurtful to give a Purge in the beginning of the Disease.

LIV. Although Clysters be not only convenient for all Bodies young and old, Men and Women, and in all Diseases of the Body; yet we must take notice, that in the coming out of the Small Pox, Measles, and *Exanthemata* we must wholly abstain from Clysters, though they be made of lenient softning Ingredients, lest, Nature's motion and inclination from the Center to the circumference be disturbed, and lost, while she is very busy, she and all her Strength be diverted another way.

LV. If the Small Pox come of hot Humors, they must be cured only with cooling and incrasating things; for unless the immoderate ebullition and heat of the Blood be stopt, the Patients hasten to their end; therefore we must then use things that check and moderately cool: As will appear from the example following; whence likewise it will appear, in what cases the Cure must be varied. *Altarpus* his Boy was taken with the Small Pox, some of which ran, so that in two dayes they left the poor wretches Body all excoriated, as I have also seen it happen in other Children. Against which I began thus; First of all because this matter was too thin, I endeavored to thicken it; not only by taking it off, but the ill quality also of the Liver and inner Parts, that no more new might be bred: And this I did with cooling Medicines, as Syrup of Roses, of Cichory simple, of Endive, and Violets, mixing them with the like Waters: His Liver was anointed outwardly with *Unguentum Santalinum*. But his Diet conduced much to it, which inclined to cooling and moistning: By all which means the Matter was made thick and the Small Pox begin to appear thick and large. ¶ In the latter end of Summer 1655. the Small Pox were abroad in our City, many Children had them, but few died, for they were kindly. At the same time two *Greenland* Women were taken with them, to whom, when several sorts of drink, which had done good to others, as well for driving out the Small Pox as to cool the febrile Heat, were profered them, they refused all, denying to take so much as boyled Water: But by making signs they so earnestly desired cold spring Water, that they signified they should dye, if it were denied them, and when it was granted them, they recovered.

LVI. Lentils are rejected by some Neotericks, because they have an astringent Faculty, and so hinder

Thiermair,
cap. 8. Cons.
lib. 1.

Riolanus,
Enchir. l. 1.
c. 3.

Mercurialis.

Idem.

Idem.

Meqcarus.

Riverius.

Idem.

Hoffmannus.

Amat Lus-
bon. chor. 18.
cent. 3.

Bartholinus,
cent. 3. hist.
82,

hinder the coming out of the Small Pox : But the Authority of so many and so great Worthies ought not rashly to be rejected ; but rather it must be concluded, that with the highest reason Lentils either excorticated or a little boyled, are added to things that drive out to the Skin ; inasmuch namely as by their astringent and incrassating faculty they restrain the too great heat of the Humours ; and hinder their running into some noble part : to which end also Tragacanth is added. This is taken from *Galen*, who 1. *de Alim. fac. c.* 18. holds, that Lentils twice boyled strengthen the natural parts, and by the astringent wherewith they are endued, do stop a Looseness : Therefore they may be prescribed or omitted, by the Physician, who has the cure in hand, according as he shall find the necessity to attenuate the Humours and to drive them out to the Skin, to be more or less urgent. For if the matter be subtil, and the ebullition great, they may be usefully prescribed, for the foresaid intentions : But if the matter seem thick, and Nature drive it slowly to the Skin, then they, yea, and Tragacanth also, must be omitted, and other things that are attenuating and diaphoretick must be put in.

Riverius.

LVII. Having made evacuation of the whole Body, unless the Small Pox come plentifully out, it will be good to abate in Meat those things that bind, and to put in some things which may open, as Leaves of Smallage and Parsly. Nor indeed do I approve of giving of dry Figs, for I condemn it for that very reason, for which Physicians commend it ; They say indeed, that Figs drive the matter from within to without, but truly their experience fails them : for Figs do not this, because they drive bad Humours from within, but because by over-heating them, they give them a kind of ebullition, which is usually very grievous, and therefore the common People hold that Figs cause the Scab and Itch : yet they are good for old Men, if they should chance to have this Disease, whose Blood naturally is not so hot as in Children. And it will not be amiss here to enquire, what is the reason that Salt fish are good for them that are sick of the Measles ? For *Aristotle* sayes, that vulgar report is not alwayes without cause : yet there is reason, We find by dayly experience that Salt fish causes the Itch, because it raises an ebullition in the Blood : Now it is found, that in every ebullition thick Humours are made thin, thin turn into Fumes, and Fumes go to the Skin : Whence it is made out, that without doubt Salt Fish are sometimes proper in these Diseases, to wit, when Nature goes lazily about the work of expulsion, especially when the wayes are narrow, and the Humours thick and inept, when there is any one or all of these, Reason demonstrates, that Salt Fish are good. When therefore in a body naturally cold the Small Pox come not well out, for any of the three aforesaid reasons, I think, notwithstanding the Febrile heat, we may with the People in Portugal, with whom this is usual, give Salt Fish ; but otherwise by no means. And this must be done with premeditation, for the Fish must be steeped a whole day in juice of Sorrel. But if it should so happen that Pustules should come within, truly you can by no one Medicine more effectually break them, purge the *Sanies*, nor dry up the Putrefaction that comes from them : And you can by no means sooner give a check, that so the Body may take no further corruption, and at last you can by no other means preserve the sound Particles safe from being affected with the contagion of the running corruption, then by Salt Fish. And it will not be amiss when they come out within, to advise first of all to eat dry Figs for ripening of them, and then to use Salt Fish. But we must remember, that we must have a care of using Salt Fish in the Measles,

(rather than in the Small Pox) and in such as are of a hot and dry constitution.

Brutus, de
victu febri-
cit. l. 3. c.
22. & 23.

LVIII. To preserve the Face, some wash it with Rose water and other astringent things, which I cannot approve of : because the greatest share of the impurities is driven to it : for its Skin is lax and soft, and so fittest to receive excrements. Wherefore if those impurities, which are sent by Nature to the Face, be repelled from it, when they are retained within, they may do much mischief ; and therefore Nature's motion must by no means be hindered.

Riverius.

LIX. I must not omit that several teach, that the Small Pox, when they are brought to maturity, must be prickt with a Golden or Silver pin, lest the pus abiding longer there leave Scars in the part. Which nevertheless is now in a manner out of use, since experience has shown that the Small Pox, when prickt, are cured more slowly, and keep their Scabs longer on, by reason of the weakness of the innate heat, which is caused in the part by pricking, whereby fouler Scars are left. Therefore it is best to leave the matter to Nature.

Riverius.

¶ *Avicenna* and the greatest part of the *Arabians* will have the Small Pox, when they grow white, to be prickt with a Needle, that the *Ichor* and corruption may be got out. For which advice they give this reason, That if the matter were kept long in any part, there would be danger that it would eat the Flesh and the part, and so the Ulcers would grow deep. *Galen* seems to favour them, 3. *lib. de Fract. c.* 48. where he writes that in *Phlyctena* (a sort of blisters) it was his custome to prick the Skin, and so at several times to get out the water and *Ichor*, that the Skin might remain whole. But this to me as well as to many others seems a thing needless and troublesome ; Troublesome, because the Patients at that time are grievously tormented ; And needless, because it is certain, they must not be prickt, till they are turned white ; at which time it is clear the Humour has done all the hurt it can ; for when the whiteness appears, the heat and power of eating the Flesh is over : Wherefore it is better to abstain from pricking, and especially because as soon as they appear white, they also dry and scale off. ¶ If the *Sanies* appear livid, watry, and indigested, and they come from a Pestilential contagion in the Air, which they often preceed, then by reason of the sharpness and virulence of the Humours, I think they should be opened, that their Poyson may exhale, and they may not eat ; yet so as that their crust, which the *Greeks* call *epidemie*, may not be taken away also : But if the *Sanies* be thick, white and well concocted, I think it better not to meddle with them : for in Breeding of such *Sanies* I know, that Flesh also grows underneath, wherewith the spaces of the Pustules are filled up.

Mercurialis.

J. Langius.

LX. There are some who desire of their Physicians, that they would get the Pustules quickly dried off, to which purpose several outward Remedies are made use of, which use to dry them up presently : Especially that, the *Arabians* call *Salting*, concerning which two things must be observed, 1. That it be not used, till the Pustules are white, because if they be then red, they are violently irritated, and the torment encreased. 2. That none use Salt alone, but some other things with it, which may take off its acrimony, for example, Take of River water 2 pounds, Salt half an ounce, Barly, Lupines, each half a pugil, Saffron 1 drachm. Let them boyl according to Art, and then with a Cotton dipt in this water touch the Pustules, which if they be so little, that they need not so much drying, another Decoction may be made ; Take of leaves of Tamarisk, flowers of Roses, each 1 handful, all the Sanders each 2 ounces, Barly 1 Pugil, Salt half an ounce. Make a Decoction. But it is best

best to be patient, and let the tubercles go away of themselves.

Mercurialis. LXI. But if they do not ripen fast enough, I would have them often touched with a Cotton dipt in a decoction of Figs and Mallows, because such a Decoction applied warm, does usually both assuage all pain, and also hasten maturation.

Fromanus, misce. cur. an. 76. Obs. 186. LXII. A Country Woman told a Matron, who desired to know a preservative from much pitting of the Small Pox, that it might be hindered, if at the first invasion of them, the Feet were often held in the Steam of a Decoction of emollient Herbs. The Matron desired to know my Judgment of it; I told her, I could not disapprove of it, because revulsion was thereby made of the fermenting Blood to the lower Parts: for the Feet and Legs are not only heated by the Vapours, but are also softened, and their Vessels and carnos parts dilated: therefore because store of Blood is gathered to them, a kind of revulsion is made of the ebullient Blood from the upper parts. ¶ It is also the custom with some, that they may preserve the Face from many Small Pox, and derive the same to the Feet, to dip the Childrens Feet in warm Cow's Milk, when first the Small Pox begin to come out; which wants not success, though not without notable detriment to the Feet, which are then full of the Small Pox, whereby grievous pains are caused, and a long weakness in the Feet does follow, but so beauty is preserved.

Franc. de le Boë Sylvius. LXIII. I do nothing at all to the Face, to keep it from pitting, because Oyls, Liniments, &c. only make the white Scurf longer in coming off, one part whereof following another, when the Patient rises from his Bed, and is indifferent well, these foul Scars appears by degrees. But the Patient need not much fear them, when by reason of a moderate regiment, the Pustules not having been much exasperated have contracted no caustick quality.

Sydenham. LXIV. The Small Pox hurt Beauty with their marks. The cure of this does not consist in this, that these Pustules be well ripened, but they must be prevented. This is done. 1. If we stop the motion or fermentation of the Humours, that they may not come from the Heart and other internal parts to the habit of the Body. I knew a certain Artist, a votary to true Medicine, who by a certain secret powder can hinder the coming out of the Small Pox, by stopping the fermenting motion of the Humours, although Spots already appear, without any prejudice to health. 2. While we apply repellents to the Face, but we must have a care they be not too strong, and we must see to the coming out of the Small Pox in the rest of the Body. ¶ A beautiful Noble Woman was much disfigured with the Small Pox, wherefore she would use some Remedies, whereby she might get the marks of them out. A certain cold Cataplasm was therefore applied by a Physician, but without judgement, for the remainders of the Disease were driven in, and the Brain was so cooled, that she received death instead of her expected Beauty.

Frid. Hofmannus, m. p. 443.

Pet. Borellus, Cent. 1. Obs. 64.

Hoffmannus.

LXV. To think to take away Pock-holes by the use of Bathes either inward or outward, is a most absurd thing.

Idem. LXVI. When the Small Pox have done coming out, the ebullition of the Humours must again be laid with such Medicines as have a precipitating virtue, and strengthen the Bowels, such as Ivory calcined without Fire, burnt Coral, Crabs Eyes, Pearls, &c. Otherwise if in the beginning we be more solicitous to stop the ebullition of the Humour, and assuage the heat, than to resist the Malignity, it will fare with us, as it does with them who labour more to take away what is rained in, than to mend the Roof.

LXVII. The malicious Small Pox have oftentimes

deceived me, for when Children have been reckoned to have escaped them, they have been over fed before the time, by the silly Women, as if they despised this Disease: But the wicked Small Pox, growing ill again, and burning a new, did fiercely assault the little ones, and scalding them, or rather roasting them, with inextinguishable heat, did at last kill them. And truly edacity in the Small Pox is usually an ill Sign. Therefore we must not trust them in the beginning of the declination and melioration: But according to Hippocrates his rule *Eph. 15. 2.* The Urine and Ordure must be looked into, which if they be bilious and of a bad colour, it is a sign, that the Body is yet impure, which by how much more you nourish, by so much more you hurt. Have a care therefore of a full diet, and you may conquer the remainder of the Putrefaction and Cachochymy.

Joseph. de Medicis, apud Hecali-um. LXVIII. A Boy five years old being ill of the Small Pox, was the third day taken with a Bloody Flux, and frequent desire of going to Stool: he voided pituitous and mucous stuff, with a great quantity of Blood; the Pustules were small, white and flat, I prescribed thus; Take of red Roses 1 pugil, red Sanders half an ounce, scraped Liquorish, and stoned Raisins each 1 ounce, boyl them in Sheep's head broth. In 9 ounces of the Colature dissolve of *Confectio de Hyacintho* 3 drachms, Conserve of Roses passed through a Sieve half an ounce, the yolk of an Egg. Mix them. Make a Clyster. Give it often. Take of water of Scabious, *Carduus Benedictus* each 1 ounce and an half, Syrup of dried Roses 1 ounce, Coral and Pearl prepared each 1 scruple, Bezoar stone 3 grains, *Confectio de Hyacintho* half a drachm. Make a Julep. Give it twice a day. Take *Oleum Scorpionum Matthioli*. Anoint the Groins and Armpits often hot. After he had taken the Clyster twice, and his Julep twice the Bloody Flux quite ceased, and the Pustules began to come out more violently, and afterwards he underwent the Disease quietly, till he was perfectly well. Although the Remedies proposed be vulgar ones, yet this case deserves observation, because the event was not vulgar: for of all the Children in the Small Pox, that I have hitherto seen, only this one had the Bloody Flux.

Riverius, Cent. 1. Obs. 71. LXIX. I learned, that a Loosness coming upon the Small Pox is not always fatal, from my own Daughter *Elizabeth*, who anno 1670 in the Month of September, being about 4 years old, was upon the 7th day from the coming out of the Small Pox taken with a Loosness, which proved critical and salutary, first of serous, then of thick and variegated Humours, which a violent Swooning preceeded. I used no astringents to stop it, being content with the use of gentle Diaphoreticks: because it began on a critical day, appetite was good, and there was no striking in of the Small Pox: This lasted 3 days, and a little after she recovered. And this was observable, that whereas before the coming out of the Small Pox she was impatient of all Clothes, so that her Legs and Thighs were exposed to the open Air, there and about her Face the Small Pox came out more plentifully than about her Back, Arms and Breast, which were clothed: So that it seems very probable to me that the matter of the Small Pox in the covered parts expired by occult transpiration, and that it would have been so in the rest, had they been covered.

LXX. It must be observed, that in Children sick of the Small Pox a Loosness is often caused by Worms, and continues almost all the time of the Disease, whereby Life is in imminent danger, because the coming out of the Small Pox is abated or hindered. And this is easily known by the thickness and sliminess and the gray or white colour of the excrements: for then things that kill Worms, and sweet Clysters must be given.

LXXI.

LXXI. When watry Pustules came here and there all over a Boys Body, but all of them struck in through the ill management of the by-standers, the Patient falling into Swoons and coldness in his extrem parts: left nothing should be done in so dangerous a case, because the Patient could swallow no Medicines I apply four Vescatories to the inside of the Arms and Thighs, following the duct of the greater Veins, in hopes that the Poysonous Humour being recalled to the Skin, might find a more ready passage out. In short, the water returned into its cells, and though they turned slowly into Pus, they made way from certain despair to former health.

Olaus Borrichius.

LXXII. A Woman was taken with the Measles, her whole Body was covered with them, and she had a violent Fever: She had moreover a most grievous Symptome, a thin defluxion upon her Lungs, which often made her Cough, and put her in fear of choaking, with an hoarseness. A Vescatory was applied to the Neck, and 2 grains of *Laudanum* were given in Conserve of Roses, the defluxion stopt that whole Night, it returned the next day, and *Laudanum* was given again with the same effect, whereby the Woman was brought in a few dayes to a convalescence her hoarseness remaining for a long time.

Riverius.

LXXIII. A young Man about 20 years old, of a thin Body and an hot Constitution, in the beginning of Spring began to have a Fever, the first dayes grievous Vomiting, oppression at his Heart, frequent hot and cold Fits by turns, pain in his Loins, watching, &c. did trouble him. On the third day the Small Pox appearing, these Symptomes abated; yet the Fever with thirst and heat continued: Not only the Decoctions usual in this Disease but the most grateful Juleps were nauseous and troublesome to him: Whenever at the hour of Sleep he took *Diastordium*, or any other temperate Cordial, to continue transpiration, though but in a little quantity, he was very restless the Night following, and the next Morning bled at his Nose; which, when the Small Pox indeed were fully come out, happening once and again upon this occasion, the Patients safety was highly endangered. Wherefore observing his Blood to be apt to ferment immoderately upon any slight irritation, I according to the occasion insisted on this method, Leaving off all manner of Medicine, he drank small Beer and emulsions of Almonds to quench his thirst, as much as he pleased. Because he refused all Oatmeal and Barly grewel, he had for his Diet Apples boyled till they were tender, and then seasoned with Sugar and Rose water, which he eat several times a day. Nature being content with this thin course, and seeming to be disturbed with any other, happily finished her work, so that the Small Pox ripening and then falling off of themselves, the Patient recovered, without any grievous Symptome afterwards.

Willis, de feb. c. 15.

LXXIV. In the middle of Autumn a young Man, who had a sharp Blood, and had been often subject to bleed at the Nose, was ill of the Small Pox: His Blood fermented immoderately of it self, so that the Pustules came out very thick all over his Body. Whey with Marygold flowers and other things usually boyled in it, also Juleps, and all Cordials, though temperate, which cause but a gentle breathing, did most certainly set him a bleeding. Wherefore I prescribe such a course of Diet, as I did before (§ LXXIII.) upon which he was better. However at the very height of his Disease (for when the Small Pox are fully come out, a Fever usually returns in all People, because transpiration is stopt) this Sick man fell into plentiful Bleeding, so that after a large profusion of Blood, the Small Pox began to grow flat. After he had in vain tried many Remedies to stop Bleeding, at length a bag with a Toad in it (that was

dried in the Sun and bruised) was hung about his Neck, and at the very first he immediately found benefit by it, for his Bleeding was presently stopt, and it returning no more (for he carried this Epitheme constantly ever after in his Bosome) the Patient still continuing his cooling diet, perfectly recovered.

Idem.

LXXV. I visited a young Gentlewoman, of a florid countenance and hot constitution, when she was 4 Months gone with Child, she was troubled with grievous Vomiting, a most violent pain in her back, and extrem heat and thirst: Her Pulse was very quick, strong and vehement. Although the Small Pox were no where thereabout, yet these Symptomes gave me no small suspicion of this Disease: However, the excessive effervescency of the Blood did indicate the letting of it, therefore I presently took away about 6 ounces; then the heat abated a little, yet the Vomiting and pain in her back continued still. At the hour of Sleep I gave her a Cordial Bolus with half a grain of our *Laudanum*, upon which quiet Sleep succeeded, with a pleasant Breathing, and a ceasing of all the Symptomes. The next Morning the Small Pox came out, which although she had them very full, yet she recovered without any dangerous sickness or fear of miscarriage, and went her full time.

Idem.

LXXVI. A Woman was brought to Bed, and the same day her Children in the same House were taken with the Small Pox; and she her self, as it seems, had taken the Infection, for the second day after her delivery they began to come out with a Fever and pain in her Loins, which indeed in 3 dayes, her *Lochia* flowing moderately, did rise well: Although she cleansed well all that time, she was very full of the Small Pox all over her Body, and not only upon the out side of her Body, but they filled her Mouth and Throat, so that she could scarce speak or swallow. The sixth day after she was brought to Bed, her *Lochia* flowed immoderately, upon which the Small Pox immediately growing flat, she was taken with Swooning, frequent Convulsions, and other ill favored Symptomes, which threatened sudden death. I prescribed her half a drachm of this powder, to be taken constantly once in 3 hours, in a spoonful of the following Julep, that is; Take of Tormentil root powdered 2 drachms, Bole Armenick 1 drachm, *Species de hyacinto* half a drachm. Make a Powder. Take of *Aqua Scordii composita*, water of Dragons, Meadow-sweet each 3 ounces. Treacle Vinegar 1 ounce, Syrup of Corals 2 ounces, burn Harts-horn half a drachm: Make a Julep. I ordered also Tormentil root to be boyled in all her Broths, and drink; by these Remedies her Uterine Purgation wholly stopt, and the Small Pox ripened by degrees without any more grievous Symptome, and fell off. This was a difficult case indeed, and was managed with great hazard, to wit, it was dangerous to keep in either the *Lochia* or the Small Pox, and yet a full eruption of either one of them, hindered the others motion; As long as they both proceeded moderately, the case, being left to Nature, was moderate. But when one exceeded, the help of Art was required. Thus it was convenient to use the curb to the *Lochia* and the spur to the Small Pox.

Idem.

LXXVII. As to meat, the *Arabians* teach that no Flesh, no not a Chicken is proper in this Disease; yea, they condemn yolks of Eggs before the Fever be over, and the Pustules be suppured, and scale off. Which seems to be a bad rule, for Children are often Sick, who, according to *Hippocrates*, want much nourishment: Besides, before they begin to scale off, 10 or 14 dayes are usually over: But to keep Children so long a time without some good food were very pernicious. Wherefore I can by no means follow the *Arabians* advice; But when I see the Sick are out of all danger, I use to feed them

them more liberally, so as their strength may be supported, and the solid parts restored, and then I give them yolks of Eggs in broth with Verjuice or juice of Lemons. And by this way of cure I can attest, not one has died in my Hands, since I practised Physick.

Mercurialis.

LXXVIII. The Measles and Small Pox agree in this, that the Pustules in each are caused by the ebullition of the Blood, while Nature separates the bad from the pure, and forces it out to the Skin: wherefore one may easily gather, that Nature must not at that time be diverted from such expulsion by gross or much food, or that is hard of digestion. But, that Nature may do her work the better, and may drive the noxious Humours from within towards the Skin more conveniently, and lest some Humour might be detained in some of the inner parts, we must give them meat that is a little cooling, and gently astringent; for such as this strengthens the parts, that they can more strongly drive out what is troublesome, besides, it has a virtue to repel hot Humours. Wherefore the broth of Spanish Lentils, with the herb Sorel, green Coriander, Oyl, Vinegar and Salt is very good; Also Gourd boyled, with Purslane, Oyl, Vinegar and Salt; Ptilan, as we prepared it in colliquating Fevers, is very good for them. All things must be avoided, which increase Blood, or add to its ebullition. Wherefore in the beginning, while they have strength, chicken broth, and all sweet and unctuous things must be avoided.

Brudus, de
vittu febril.
lib. 1. c. 22.

LXXIX. But when they begin to go off, it is good to mix such things in meat as loosen the Belly, as Prunes, Violets, Borage and the like. But Prunes that have an Astringent Faculty, as French and Spanish, may be used all the time, boyled with black Maiden-hair, or Purslane, or Plantain. And let the drink of such as have the Small Pox or Measles, be Barly water boyled with black Maiden-hair and Pomegranate.

Idem.

LXXX. There are some, who give Lettuce boyled in Vinegar, and the pulp of Citrus and water-Melon; And some give water of water-Melon to drink. But, as I think, these Meats do more hurt than good: Because they hinder Nature's expulsion, and by their excessive coldness retard the coming out of the Pustules; for such expulsions as these from within to the Skin, are made by Nature, the matter inclining that way, because it is then turned to Vapors, being of a thin substance. Wherefore as the ebullition must not be encreased by hot, fuming things, so neither may it be extinguished by excessive cooling things.

Idem.

LXXXI. Whenever the Small Pox are epidemical, and have grievous and dangerous Symptomes attending them, we must take care quickly to remove Children and the younger sort, who have not yet had the Small Pox, into a more wholesome Air, where no Small Pox reign, and to keep them there till they either cease or grow more kindly. But on the contrary if they be kindly and well conditioned, that is, if most People have but few, if they come quickly and easily to suppuration, and if they fall off without any notable disfiguring, then I am so far from perswading you to avoid the Air that breeds the Small Pox, that on the contrary I think it advisable, to let the Children, that are yet well, be in the same Chamber with the Sick, to the end they may have the Small Pox, while they are gentle.

Sylvius de le
Boc.

(Of the Measles see more BOOK XI.)

Medicines especially made use of by eminent Physicians.

1. In the Small Pox and Measles Oyl of Gold is very good. ¶ The use of *Mercurius vitæ* is good for Children, when you fear they will have the Small Pox. ¶ *Mercurius vitæ fixus* is very good in the Small Pox. Joh. Agri-
cola.

2. This is admirable good for a scar in the Eyes left by the Small Pox; Take of juice of Dasy clarified 2 ounces, juice of red Poppy 1 ounce, water of Honey 6 drachms. Mix them. Drop a little into the corner of the Eye. Augenius.

3. This is very good to take out the pitting of the Small Pox; Take of Oyl Olive 1 ounce and an half, juices of Lemon 6 ounces, washt Litharge, ashes of burnt Snail each half an ounce, fat of an Hen half an ounce. Mix them for a Liniment, after which the Face may be washed with a Decoction of Lupins. Claudius.

4. To drive out the Small Pox give *Avicenna's* decoction, of Figs, excoriated Lentils, and tragacanth. Take it 4 or 5 times Morning and Evening. ¶ A draught also of Fenil water Morning and Evening is good. Crato.

5. I ordered one that had the Small Pox in his Throat, continually to gargle with Goats Milk and Plantain water mixt together warm, which miraculously preserved him. For the same purpose, I ordered him often to swallow Syrup of Pomegranates by degrees, because I had often tried the admirable benefit of it in the like case. ¶ Among things that drive out, some commend water distilled off Lime flowers, as a thing very good for it.

6. I have found the following powder admirable good in the Small Pox, and in all contagious Diseases. Take of Salt of Ash 8 or 10 Grains, *Bezoardicum minerale* from 5 grains to 10. Mix them with *Aqua cornu cervi citrata*, and Angelica water. It is a most effectual, Antilemick, Diaphoretick drink. Joh. Lud. &
Frundekk.

7. To bring out the Measles and Small Pox, this is highly commended; Take juice of Fenil and Parsly, wet a cloth in them warm, and so let the Children be wrapt up therein warm. Or, Take Parsly and Fenil water, wet a double Linnen Cloth in them, wrap the Child up in it warm, repeating it often, it brings out the Small Pox powerfully. Dav. Lipse-
lius.

8. To take off the ill colour of the Skin; Take of Lupines, Beans, Barly each 1 pugil and an half, pound them after a gross manner; boyl them in a sufficient quantity of water, till the water grow as thick as Pap. Wash the Face and Hands Morning and Evening. Mercurialis.

9. I can attest, that by giving half a drachm or a drachm of Columbine Seed in powder, with Mede, or the distilled water of Fumitory, *Carduus Benedictus* or Harts-horn I have saved several Children in the Measles from the Grave. Simon Pauli.

10. The Oyl of Tender Harts-horn and the Skull, may serve Children instead of *Bezoar*, especially in the Small Pox and Measles. Eustachius
Rhodius.

11. The red Oyntment for Children, which is most Famous in the Small Pox and Measles, when you fear them; for the benefit of it is unspeakable, if a little of it be given a Child or a grown Person in small Wine, and then the Patient be covered with Clothes till he sweat, by which Remedy whatever corruption is within, it will break out at the Skin all over. It is made thus; Take of new fresh Butter, that was never salted 2 pounds, *Alcanna* root 2 ounces, red Wine 1 pound, Castor 6 drachms, let the roots bruised be steeped in the Wine for a day, then add the Butter, and boyl them on a gentle Fire till the Wine be consumed, strain

Joh. Steph.
Scrobelber-
gerus.

Strain it, and then put in the Castor. ¶ Oyl and Balsame of Rosemary are approved, in taking out the Pits of the Small Pox, and restoring the Face to its former Beauty.

Venena, or Poysons.

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Medicines.

I. NOW that we are treating of the manner how Alexipharmacks act, we presuppose, that Poysons violently oppose the innate heat, or the consistency of the Blood and Serum, and their intimate mixture. 2. That they do not work so much by occult, as by manifest qualities (in regard of the said Hypothesis) inasmuch as they cause a more or less violent resolution of the Blood, according to the degrees of energy in acting. Hence, as many errors have sprung up in Physick, Physicians not thoroughly considering, in what the nature of Poysons consists, and acquiescing in their occult quality only, so also they have been mistaken about the activity and virtue of Alexipharmacks, which have been hitherto thought to work by some occult quality, whence arose so many Elogies of the Bezoar Stone, that it has been reckoned the conqueror of all Poysons, and so in the Unicorn.

II. This is to be observed as a general rule concerning particular Poysons, wherever a particular Poyson is not known, we must fly to general Antidotes; but if it be known, we must oppose to it, besides Universals, which strengthen the Heart and the innate heat, Specifics, that is, proper contraries. And then likewise we must take notice, that there are many Lies in Books concerning Poysons, and there are both Poysons and Antidotes described, which were never seen, used, or any way applied.

III. Poyson directly opposite to our nature is threefold. It hurts, 1. The Spirits. 2. The Humours. 3. The solid Parts: According to the differences whereof the Physician must be diligent and cautious: Nor let him think, that Mithridate or Treacle or Treacle water can conquer all Diseases. And among all Poysons they are the worst, that hurt the Spirits, both because they possess the noblest parts, and because they are difficultly known: For since they are not visible, but for the most part aerial, they enter the Body by Smelling or Breathing, and not by meat or drink. Hence it is, that oftentimes there can be no suspicion of Poyson, and the rather, because, while the Poyson is not yet well rooted, some accidents common to other Diseases appear, which deceive the Physician. Let him therefore have Medicines prepared, which may cherish and defend the Spirits, by expelling the Poyson, which is directly opposite to the Spirits: Nor should he let a Poisoned Prince alone through his negligence, to dye afterwards miserable, as if he had only a little Fever, or some slight Disease. But no Physicians treat of Spirituous Poysons.

IV. Many who do things hap hazard, take almost all their Medicines from Poysons prepared, when yet this should only be done in desperate Diseases, when gentle things have been tried in vain, according to Hippocrates, because very bad Symptoms arise, and often times death, upon applying them only outwardly. So a certain Noble Woman, who desired to make her Breasts less, by the advice of a certain Physician applied Hemlock to them: So another, to get the marks out of her Paps and the top of her Breast, applied a Remedy made of Arsenick and other Poysons. But both of them, while they were careful to preserve their Beauties, lost their Lives.

V. Some say, if two Poysons be taken inwardly, they will fight one with another, and leave the Body unhurt, as Pliny writes of Wolfsbane, that if it find an equal Poyson to contend with, it will be utterly destroyed by its equal Poyson, and the Man will live; but if it find no such Poyson, it kills a Man. And the story in Ausonius of an Adulteress who gave her Husband Poyson, and thinking what she had given too little, she gave him Quicksilver; either of which alone, the Poet thinks would have poisoned

Panarolus
Obs. 27.
Fensce. 3.

Borellus,
Cent. 2. Obs. 3.

poysoned him; but both together one destroyed the other. I cannot allow this, for I know, that Wolfs-bane taken by a sound, or by a poysoned Man, has alwayes a mortal faculty. And I should think that Physician very ill advised, who should give one Poyson after another, that one might weaken the other. *Ausonius* his Adulterers cured her Husband, not because of the fighting of the two Poysons together, as he thinks, but because of the weight of the Quick-silver, that carried down the other Poyson before it was actuated.

Augenius.

VI. *Avicenna* sayes, that in the Venome of Venomous Creatures, which go right to the Heart, Bleeding drives the Venome to the Heart.

Palmarius.

VII. We know that *Diaphorides* and other ancient Physicians evacuated generally in curing of Poysons. In the Poyson of a Sea-Hare, l. 6. c. 30. he gives a drachm of Hellebore and Scammony. *Avicenna* in the bite of a Viper gives Turpeth, and writing of Agarick, he sayes, it is very good against Poysons, if it be taken in Wine: And not only as it acts from propriety, which many of the moderns have thought, but as it purges, for he gives almost 2 drachms of it, which quantity will purge sufficiently. But if purging would hurt those that are poysoned, so great a quantity of it had not been given.

Rubens, in Celsum.

VIII. A Savoyard, a strong Man and Phlegmatick about 40 years old, dwelling near the lake *Lemane*, was, together with his Wife, poysoned at a Feast. She died a little after, he, being very ill, left the care of burying his Wife to his Friends, and crossed the Lake to me about 6 a clock in the Morning. Aphorism 6. 1. of *Hippocrates* came into my mind. Wherefore when I found, that the Poyson was still in his Stomach, from his pain, belching and other signs, and therefore there must be occasion for a strong Vomit, I gave him immediately 6 grains of prepared Antimony in substance (for the violence of the Disease would not admit me to give the Infusion) with 2 scruples of *Confessio Alkermes*, and a little Harts-horn burnt and prepared. The same day after he had Vomited much, the pain and burning at his Stomach almost wholly abated. Every day after he took some strengthening Electuary. For his ordinary drink he had nothing but Almond Milk with Sugar and a little burnt Harts-horn prepared. Within a few dayes he was perfectly well.

Hildanus.

IX. If Poysons be taken inwardly the whole stress of the Cure lies on Vomiting, and giving of Alexipharmacks after. And the Vomits must not be strong and malignant, but gentle and made of such things as have a smoothness in them, as water with common Oyl, of *Sesamum*, Nuts, &c. that if the Poyson have any Acrimony or Corrosive virtue in it, it may be taken off, and the internal parts guarded as it were against it, such as the said Oyls, or fat broth with a Decoction of Broom-flowers, Milk, Butter, Radish and the like. Nor is it sufficient to provoke Vomit once, but it must be continued so long, till no more signs of the strength of the Poyson in the Stomach can be found, from taste, smell, reaching, pain and biting.

Sennertus.

X. But Alexipharmacks or Bezoarticks are either 1. Refiners of putrefaction, and things that preserve its oily parts safe, that it may not turn flat, and that by inflaming and invivifying it, and indeed the more volatil, such as bitter Aromatick, Oily and Balsamick things are, *Angelica*, the Carline thistle, Zedoary, Myrrhe, *Opobalsamum*, Juniper berries, &c. sharp Volatils, Sulphureous and Saline things, as Plow-man's treacle, Garlick, Camphire, &c. Spirit of Harts-horn, Ivory, &c. and acid, by concentrating & penetrating together, Juice of Citron, Vinegar, *Acetum Bezoarticum*. And these are especially proper in Epidemick Diseases arising from a thorow putrefaction, as the stench of dead Bodies, also for Fevers in Lying-in-Women, both

for prevention and cure, also in the biting of a mad Dog and of Spiders.

XI. Or. 2. They hinder Ichorefcence, resolution, and too great rarefaction of the Blood; and so respect the tie, and as it were the individual copula and conjunction of the Serum and Blood, whether they be a little austere Astringents, in which respect Tormentil and Bistort are Famous, but not so convenient for costive People; Or Mucilaginous, as *Cornu corvi Philosophicum*, Gelly of it, *Scorzonera*, or earthy Absorbents, and precipitators of the resolute ferment, as burnt Hartshorn, *Unicornu fossile*, Bezoar stone Oriental and Occidental, and the Bezoarticks of the Chymists, which have no peculiar Alexipharmack virtue, but only to soak up and disperse; wherefore we must not alwayes trust them; Or Acids, which obtund the Sulphur of the Blood, as acid Spirits, volatil Spirit of Salt, compound Spirit of Salt and Nitre, &c. Or Opiates, which indeed, especially joyned with other things, deserve to be reckoned among Bezoarticks, so they be given as they should, and at a due time. For if any thing do it, certainly Opiates preserve the Bond of the Serum and Blood inviolable; wherefore Treacle made without *Opium* does not cause Sweat, nor answer expectation. And these are very good, especially in the Sweating Sickness, a Malignant, Epidemick Dysentery, and in other Malignant Diseases, where there is heat in the Bowels.

XII. Or 3. They promote Serum and its motion, and hinder its coagulation and thickning by boyling (if I may so say) such as, besides some of the foresaid things, that make it fluid, as Salt or Nitrous things, or volatil both Urinous and Mercurial ones, as native Cinnabar, Cinnabar of Antimony, *Mercurius fixus diaphoreticus*. For it must be observed as a rule, In Malignant Fevers, wherever the Serum is as it were coagulated, and then no Sweat can be got, but all things are burnt up as it were, Cinnabarines prudently mixt with other Bezoarticks, do mightily promote its fluidity. But if the Blood incline to dissolution and ichorefcence, they must be wholly avoided, nor are they safe or to be trusted in the convulsive motions, which then follow, from which very thing a vast difference in their power of acting arises: And things that increase it in substance or quantity, and refresh, and dilute it, as distilled waters, Decoctions, Infusions, and especially Emulsions, which in Malignant Diseases are of great advantage to this very end: For unless this Serum be restored, which it may be by plentiful drinking (so it be not too much) all endeavours besides are to no purpose, and sleep especially cannot be recovered, but a violent delirium must of necessity arise from continual waking, and then convulsive motions. These things are good in general for Poysons, either given designedly, or taken by mistake, by defending the Heart and preserving the tone of the Blood inviolable, and for Malignant and Pestilential Fevers, Hungarian, Spotted Fevers, of Lying-in-Women, Small Pox and Measles, and such contagious and ill natured Diseases.

XIII. No one Alexipharmack does equally resist all Poysons, and therefore no more must be attributed to any than what experience can testify. There are indeed three of general use, which a good Physician cannot be without; The Bezoartick Tincture in a liquid form: Treacle and Mithridate in a middle form (whither the like Electuaries, Orvietan, &c. may be referred) very ancient Medicines, approved by so many ages, and therefore, though they be made up of a strange Medley of Ingredients, not lightly to be rejected: In a solid form, Bezoartick powders, but great prudence is required in giving them.

XIV. The promiscuous use of Alexipharmacks is not convenient, therefore the distinction of them according to their strength is necessary, into Volatil,

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til, Middle and Fixt. Therefore *Weiffelius* in *Grato's* Epistles 248 wisely distinguished such Medicines into a twofold *Classis*, namely, Of Absorbents, or of Hydroticks and Sudorificks properly so called, which except it be done, a great deal of ambiguity and controversie must arise, yea and by this means the application will be worse than Empirical.

XV. In the beginning Volatils are most needful, for greater penetration and quicker discurſion: Also where the Malignity is intimate, when nature ceases from expulsion of the Fever Spots, Small Pox or Measles, or these *exanthemata* seem to go in, with difficulty of Breathing, oppression at the Heart, &c. In the progress more fixt ones, where namely there is most need of alteration and precipitation, especially about the state and declension, when the Tumult is laid, Watry things are of a middle nature, and may be joyned to either.

XVI. The more temperate and mild are most proper for Women with Child, Infants and weak Persons, and where the Blood enclines most to Ichoreſcence. Wherefore when Treacle is not proper, *Diaſcordium Fracaſtorii*, as a more temperate one, has place. Where there is no place for *Tinctura Bezoartica*, though it may be qualified, there a Bezoartick powder may be given: For if too Volatil things be given to such, the rarefaction of the Blood is the more increased, and so further mischief may arise.

XVII. Poyſon is not removed only by Sweat: for the Serum must not be wasted too much; Wherefore neither hot things alone, nor temperate things alone, nor sweating alone with any Medicine whatever, is sufficient. In which thing both the vulgar are mistaken, who think they can do all things with powder of *Carduus Benedictus* or Harts-horn, and the Physicians also, who weary their Patients with continual Sweating: for all things should be done according to Nature's duct and indication.

XVIII. We must not trust too much to Medicines made of Serpents, Vipers, to Bezoar Stone, Unicorn, &c. For Salt of Vipers among Volatil things deserves high commendation; Bezoar Stone and Unicorn among fixt ones; but let no Physician trust to the powder of Vipers, nor let him believe in general, that by these alone he can conquer this Lernaean Hydra, to wit, the Poyſon.

XIX. It is better to abstain from things suspected than to use them, at least not alone, such as *Nux vomica*, root of Leopards bane, although it be much used to make Men vertiginous: For it is better to use select things, than to rely on an uncertain effect, which, if it succeed ill, may be ascribed to the Medicine.

XX. Alexipharmacks taken betimes before one go to Sleep, are more effectual, yea by this means Men often quite nip the Disease in the Bud, which is *Helmont's* observation, and most agreeable to experience. Therefore one must not sleep upon them, for in Sleep the Poyſon may easily creep to the Heart.

XXI. And Volatils are inconvenient, especially for Caco-chymick Bodies; wherefore upon urgent occasion leniments, and Balsamick evacuators may be used. But though the Malignity be great, yet we must have a care, that we confound not the Humours with any Alexipharmacks promiscuously.

XXII. And then Authors advise, since Alexipharmacks are of divers temperaments, to oppose cold Poyſons, with hot Alexipharmacks, hot with cold, dry with moist, moist with dry. Which when it can be done, I do not disapprove; But I think we should more regard the Alexipharmack virtue which is properly opposed to the Poyſon, than the manifest qualities. And therefore both Treacle and Mithridate, which are hot, are given in hot Poyſons with success.

XXIII. Let these that Live at the metallick Mines, and at the Furnaces, as also Goldsmiths, Chymists and such take care that they never be without some proper Remedy ready at hand, seeing this of the Poet is true here, *Principiis obsta* (hinder the beginning.) One having Poyſon, it may be Sublimate, given him privately, he swelled immediately in his Head, Lips, Mouth, and all his Body over: A violent heat in his Throat followed with Convulsions: he was given over for lost by all: *T. Knoblochius* gave him *Turpethum minerale* in a large dose thrice in 24 hours, which wrought violently upwards and downwards, then gave him strengthening things, and he recovered perfectly. So we shall scarce be able any other way to expel the malignity of metallick Fumes than by mineral Medicines. Thus a Goldsmith's Boy being very ill of an *Asthma*, was cured by *Mercurius dulcis*.

XXIV. They mistake, who think Alexitericks should not be outwardly applied to the stings and bites of Venemous Creatures, but only be given inwardly: for they think, that if Alexitericks be applied outwardly, they will be so far from drawing out the Poyſon, that they would rather strike it in, Which I allow may hold good in true Alexipharmacks: But if some Medicine should consist of Poyſons and Alexipharmacks, it might do both; by its venome attract through similitude, and by its Alexipharmack virtue cure it.

XXV. *Averroes lib. de Theriaca* and *5. collig. c. 32.* writes, that Bezoardick Medicines are only of use, when the body is infested with poyſon, but that they do hurt to healthy bodies, if given to them: yet he excepts one, which is Citron-feed, this is good for bodies in health. And against Treacle especially he uses 3 Arguments. 1. That all its Vertues are so disposed, that when they suffer nothing from Poyſon, they become like poyſon, themselves. 2. That Treacle attracts Poyſon, and therefore since attraction is made by similitude, it must be like poyſon, and therefore not fit for sound bodies. 3. That is a very strong Medicine, and of great Activity. But *Galen's* opinion is better, who *l. de Theriaca ad Pisonem c. 16.* and *l. de antid. c. 16.* commends Treacle as a most excellent Medicine to defend bodies against poyſon: with whom *Avicenna l. de vir. cordis*, and almost all other Physicians agree, yea experience it self shews, that what things are true and genuine Alexipharmacks, may also safely, and with benefit be given to sound bodies, to defend them against Poyſon. And sound bodies can by no means be poyſoned with true Alexipharmacks, as *Averroes* would have it, but rather acquire from them a certain property repugnant to Poyſons. 2. And Treacle does not attract but resist Poyſon. 3. Although it be strong and of great activity, yet given in a certain dose and with caution, it has its place even in sound people: as is manifest from the example of *Mithridates*, and some Roman Emperors. Yet observe the difference of Alexipharmacks: for some of them have no quality in excess, as Bezoar, *terra sigillata*, Bole Armenick, Harts-horn, &c. which may safely be given to any age and body. But such as are hot and dry, as Treacle and Mithridate, must be given with caution, and care must be taken, that no damage follow the excessive use of them.

XXVI. It may be queried, Whether every venomous creature carry its antidote with it, and whether its flesh be good against its bite or sting. I say, this Position holds not universally true, for however the fat of Vipers, according to our own experience, assuage the wound inflicted by its bite, and the Oyl of Scorpions their own sting: yet this is not equally extended to all. For as to the Viperine and Serpentine Powder in particular, first, I say, the bitings of Serpens are not so hurtful, yea scarce venomous: the Serpent is a dull creature, and if one set on it boldly, it may be handled and killed without harm, and it has far less teeth: But the Viper

Horſius. l. 7. Obs. 25.

Sennertus.

Idem.

per darts its Poyson far quicker into the Body, for it has crooked Teeth, which Serpents have not, and by wounding with these crooked fangs they hurt the Membranous and Nervous parts especially, and besides their *Saliva* full of bile, or a sharp volatil Salt, gets into the wound, whereupon a preternatural, corruptive Fermentation arises. And then we must not altogether and universally give credit to this *Hypothesis*, That the Flesh of Vipers or Serpents expels their own Poyson, either in the cure or prevention: for it were better to drive out the putrid ferment, and hinder the afflux of Humours by Sudorifics and Alexipharmacks, lest because of a caustick, volatil Salt, communicated to the part and Blood, that part itself should be Gangrened, and Convulsive motions should arise. Nor does the vulgar *Hypothesis* hold good, that when one has taken powder of Vipers or Serpents, for this very Antidote Serpents may be handled without harm: for some who have in this manner been over confident, have had the reward of their confidence. Two Noblemen thinking themselves secure in taking powder of Vipers before hand, did nevertheless after this incur danger, and were not well, till immediately after they had taken a Bezoardick.

XXVII. Whether are they, who have once or oftner taken the powder of Serpents or Vipers, for the future, safe from the bites of those Creatures? I answer, It is not confirmed by experience, that if any man have taken the foresaid powder, he is free from the bites of the said Creatures, since it has been often tried, that they who have used this prophylactick, have nevertheless, when they have been bitten in a Nervous place and very deep by Vipers or Serpents, provoked to anger and chafed, violent Convulsions and other dire Symptoms immediately arising, ended their dayes in Groans and Sighs. Besides, if this assertion were universally true, it would follow, that when a Viper bites a Viper, and one man another, there would be no danger in biting one another, since all the bitten Viper consists of the matter of the Viperine powder, and so would be above the activity of the Symbolical Poyson: But it has been tried that a Viper bitten by a Viper has died; and also that a Man bitten by another enraged Man, has been in danger of his Life. Therefore in *Italy*, when Men are bitten by Vipers, they are cured not only by taking the powder or flesh of Vipers, but by speedy Ligatures, Scarifications, Cauterizations, attrahents, and by expellers and Alexipharmacks given inwardly. And whereas some can handle all sorts of Serpents as they list, without danger, though they never took any powder of Serpents, I think this comes. 1. From some peculiar gift or property, granted by Nature to this or the other Man, and sometimes to some whole families. 2. From some mens singular boldness, joyned with a great dexterity in handling them. Besides, provident Nature has implanted a certain dread and fear in Serpents of Men that pursue them boldly: for all those who employ themselves in that business, do confess that the Serpents are so afraid of them, before they see them, and slide away so fast, that they can scarce overtake them or lay hands on them: It happens quite contrary, if timorous men meet Serpents, being moved with hatred they set upon them, and do them what mischief they can: Which very fear may much exaggerate the Poyson received from the biting of these Animals, and disperse it all over the Body, and by consequence cause sudden death; which Poyson of its own Nature is not so very mortal, just as it happens in the Plague, where the timorous are in far greater danger than they who are of a fearless mind. I will easily also grant, that they who have taken the viperine powder, may take heart and strengthen their confidence from thence, so that thenceforth they may not from such hurts be in so great danger of their

lives: for they will slight the hurt, and therefore will be but slightly (yet *ceteris paribus*) thereby affected. Zwefferus.

XXVIII. *Pliny* says that Scorpions in *Italy* are sometimes harmless; nevertheless at *Padua* I have observed their stings to swell much and be very painful. *Petrus à Castro* observed the venome to return in himself and a hen a year after: For when the Sun was passing the Sign *Scorpio*, a black and very Venomous Scorpion stung him in his Fore finger of his right Hand: he presently felt a pain and chilness in his Arm, and a heaviness in his Finger: The Scorpion was taken and bruised and applied to the wound, and other Alexipharmacks; but all to little purpose. He thrust his Finger into a Hen's breach, and his pain ceased in an hour and an half: the Hen swelled and was half dead, yet upon swallowing a little Treacle she recovered, but halted: Upon the return of the very same moment of time the next year, the Hen was convulsed, and fell down trembling and lifeless, till she was restored by taking a little Treacle. That Excellent Person felt the pain in his Finger return at the same time, with a Phlegmonous tumour, who, after sharp and yellow pus had been evacuated, and Antidotes given, he was perfectly well after it. Rhodius, Cent. 3. Obs. 90. *H. Furenius* and I have observed at *Padua* that Tobacco is a Remedy for them.

XXIX. It is observable, that Acids correct most vegetable Poysons, as Monks-hood, Deadly Night-shade, which besides other Symptoms, close the Throat, so that Men cannot swallow Hellebore, &c. which is a manifest token, that their mischief must be ascribed to a volatil Salt, and to a Sulphur, that is immature, indigested, and inviscated with much macilage; wherefore when they are either communicated to the Blood or are still floating on the Stomach, they are apt to obstruct the Pores of the Nerves, and vellicate them, to destroy the frame of the Blood, and to cause death.

XXX. Vomits are good for all, who have eaten Poyson, except such as have eaten Musciromes and are in danger of strangling: for they must be carried downwards, as may be proved from their Antidote, the wild Pear, and other Astringent things. Therefore they must be carried down with Clysters and purging Medicines, and the Mouth of the Stomach must be closed with Astringents, as with Quinces, wild Pears, &c. Their Alexipharmack, according to *Sanctorius*, is Oyl of Citrons. Rondeletius, p. 517.

XXXI. Hemlock according to *Dioscorides*, *Med. l. 4. c. 79.* is a Poyson that kills because of its coldness. Which saying seems to have given Physicians the occasion to determine, that its temperament was cold, without any further search. But on the contrary many Histories of such as have eaten of it, either by chance or through mistake, do show, that it acts on our Bodies, rather by hot, sharp, fierce or otherwise efficacious particles, than by obtuse and torpid ones. Histories of several in *Smetius* his *Miscel.* p. 599. who eat of the Roots of Hemlock boyled instead of Parsneps, prove that it is hot, and does hurt by its hot particles, for they were all mad: Then, it has a nauseous, loathsome scent with it, like wild Parsnep. *Galen* *5. de s. m. fac. c. 18.* calls it even aliene and adverse to Man, while it is yet whole: then it pricks the Tongue with a certain Acrimony, and it is manifest, that its sharp taste is hot. Some of it was given to a Dog: he vomitted, and was very convulsed, when his Body was opened, his Stomach was found contracted and corrugated; the mucus being wiped off, the inner superficies appeared redder than it ought, and there were red and livid Spots in the bottom of the Stomach. It created a certain anxiety in the Dog by gnawing and convulsing the Nervous parts of his Stomach; Convulsions are an effect of no dull and cold cause, the red superficies of the folds show it to be hot and almost caustick. Therefore

caution must be used in reading and imitating those who give Alexipharmacks promiscuously, before the use of evacuators, or when the Hemlock is not discharged out of the Stomach. Many advise generous Wine; but according to *Galen* and *Pliny*, drunk with Wine it sooner kills, because its Acrimony is encreased by the Wine, and more easily carried to the Vitals. Therefore let Vomits be given presently to discharge it, and it is not necessary that they should violently irritate and provoke the Stomach, when the Stomach is already purged up, let large draughts of warm water and oyl be often repeated, for so the wayes are made more lax, and the Vomit comes sooner & with less straining. You must proceed in these draughts, till all the Hemlock be discharged out of the Stomach.

*Wepferus de
Ticina. Aqua-
tica.*

XXXII. Henbane is thought cold in the third and dry in the first degree, the reason is, because *Galen* has said so, and because it is used successfully to hot distillations, to thicken, obtund and sweeten Rheum. But I reckon the same fate has befallen Henbane which befell Hemlock, while its virtues have only been cursorily observed, and almost only according to one or two Mens sayings of it. In the year 1649. A Sallet was prepared, whose matter should have been Cichory roots boyled: they grew on the same Bed together with Henbane: Hereupon some found their Heads go round, others had their Tongues and Lips distorted, their Throat harsh, &c. There was one who studied to take off the heat of the Mouth with a Gargle, but the Tongue was as if it had been fried in a pan, and refused all Medicine. The madness and intemperance, which befell some, were not so very dull, that they could be imputed to cold, &c.

Idem.

XXXIII. Hemlock (as Henbane also) is the safest and certainest way got out of the Stomach by Vomiting. Purges would carry it off by long windings and turnings, not without danger, whilst a new affliction would be added to the Patient sufficiently afflicted already with the raging torments of his Stomach, when the enemy were forced to the Guts, to which it would be no less troublesome than to the Stomach, and some of them would be less able to bear it, because they are tender, and endued with a most exquisite sense. And this must be done before the use of any other Medicines, lest the virulence of the Hemlock be sharpened, the irritated stomach be exasperated, and the Hemlock or the ferment of the stomach tainted with its juice, get into the Guts, and being mixt with the Chyle, into the mass of blood. *Dioscorides* seems to advise the same.

Idem.

XXXIV. When all or the greatest share of the Hemlock is got out of the stomach and guts, *Dioscorides de Alexipharma. cap. 11.* thinks, then men should drink generous wine, as the greatest and most present remedy. *Pliny n. h. 25. l. c. 13.* without doubt commends a hot Wine, because he thought Hemlock among many other things to be cooling, which he plainly intimates, when he affirms, that the juice made of the feed kills a man by thickning his blood: But since from many reasons and experiments it is clear, that Hemlock is hot, Wine must do good some other way than by heating; and it appears more probable to me, that Wine, when the Hemlock is got out of the stomach, is therefore a more present remedy, because it speedily repairs the Spirits lost by the vehement affliction, raises them oppress, because the circulation of the Blood is sometimes hindered, and sometimes most confused, and this way above all others it restores the strength. Wine will do these things more effectually, if according to *Dioscorides* his advice Wormwood, Pepper, Castor, Rue, Mint, *Anonum*, *Styrax*, Nettle-seed, Bay-leaves, be added, or any of the like nature found out by *Dioscorides* his followers. The great Antidotes, Treacle, Mithridate, Orvietan, will do good, in as much as they

dissolve the Blood and *lympha*, while they stagnate somewhere or other, their circular Motion being intercepted, through the conflict upon taking the Hemlock, and therefore leave behind them some oppression of the Spirits, weariness, and other troubles.

Idem.

XXXV. *Santorellus* his Advice, *Antipr. l. 21. cap. 10.* must not here be passed by, who, after he had not disapproved Sudorificks in the fore-said Cases, if the Poyson had insinuated it self to the inmost Parts, and had preferred for a Poyson newly taken fat things, Milk, Butter, Oyl, subjoyns at last, *That drinking of warm Water and Milk, does good, because they have a power to extinguish Heat, which Poysons for the most part cause.* Yet this must be carefully observed, that Milk must not be immediately drunk after Wine, nor Wine upon Milk, lest it should curdle, whence new Disturbances might be feared; which they do experience, who endeavour to cure or assuage the Gout by drinking of Milk.

XXXVI. Antimony is as it were the spring and source of many excellent Medicines, while the energies of all Metals and Minerals, and the Cures of most grievous Diseases are comprehended in this as in an inexhaustible Abyss, so that wholesom Medicines may be got out of this, as out of *Amalthea's* Horn, which by dissolution and absterfion remove and consume Impurities and morbidick Ferments which are Enemies to Nature, together with their Anodyne and comforting Virtue. Yet seeing, according to *Paracelsus*, it is the mere Marcasite of *Saturn*, having an Arsenical Sulphur in it self, it is not void of all poysonous Quality: for it has in it a certain subtil acid Salt, which consists of a poysonous Vapor or Steam, almost of no substance; as is manifest from its Glais; for an halituous Poyson is sent from the Antimony either by the flame of the Fire, or burning of Nitre, then the *Minera*, or its salt Subject is again sated with the said Spirits of the acid Salt, which yet because they consist of Flame and Nitre, are not proper to the Antimony; yet in the mean time they exercise the same violence.

Hobmannus.

XXXVII. Some maintain that Quicksilver is harmless, because it is taken by many, yea, by Children in the Worms, without damage: Others, backed by Experience, say it is poysonous, because it, just as other Poysons do, causes Stupidity, Convulsion, Trembling, the Palsy, Epilepsy, Apoplexy, Swooning, yea, sometimes Death; and they are seldome found to be long-lived, who dig in its Mines. And I think this latter Opinion more consentaneous to Truth. As to the Experience of them that have taken it without hurt, that excludes not its venosity. For, that an Action may be done, a right application of the Agent to the Patient, and some continuance of time, is required, which if wanting in them that have taken Quickilver, it can do no hurt: For it is given either alive or prepared: If alive, it is less hurtful, for seeing it is a Body most exactly mixt, and its minime Parts do pertinaciously one stick to another, which is the reason, why it is perpetually moveable, while it is entire and alive, and that it does our Bodies little or no harm, but is presently voided by stool: for in the very same manner as a leaden Bullet swallowed, is voided presently, without any harm done; but if it be dissolved into minime Particles, and tarry till it contract rust, it may do much mischief: So, if Quickilver be taken entire, moveable and coherent to it self, and by reason of its mobility be presently voided the Body, it does no harm; but if it be resolved into minime Parts, especially by the admixtion of Salts, and by their means be sated as it were to the Body, and penetrate into it, both outwardly

wardly and inwardly used it causes most grievous Mischiefs, as either sublimate or precipitate doth shew. Nor must the corrosive Virtue be attributed to the Salts, for in the Fume, that exhales in gilding of Silver there is nothing of Salt, and yet it is exceeding mischievous: Nor can that little Salt, that is mixt with sublimate or precipitate, do so much damage, seeing Salt, though given in a great quantity, does no such thing. As for prepared Mercury, many indeed extoll Mercurial Medicines: some call the precipitate Powder *Angelicus*, otherwise prepared *Mercurius vite*: Some judge, that *Mercurius dulcis*, rightly prepared is as gentle a Medicine, as *Manna*, *Tamarinds*, or *Cassia*: But these praises are too high, and their rashness is to be blamed, who give Mercury in any Diseases whatever, for there are many Examples of such as have perished, or been in great danger of their Lives by the use of such Medicines: Therefore *Fabricius Hildanus* calls *Mercurius vite* either *Mercurius mortis* or *vite aeterna*. It is certain that *Mercurius dulcis*, which yet is reckoned the mildest, may sometimes do mischief. ¶ Although Quickilver, as quick, and moveable, be not Poyson, nor have any affinity with Poyson, so that it has been experienced, it may be taken safely inwardly; yet the Physician must be very cautious in this, lest it be adulterated, or ill prepared, and that he give it not to Hypochondriacks, Spleneticks, and others that have too acid a Ferment in there Stomach or a Blood abounding with strong, acid and corrosive volatil Salts, which might render Mercury of the Nature of precipitate. For that Mercury resolved, whether precipitate or sublimate, is a Poyson, the dire Symptomes, common to other Poysons, which it immediately causes in the Body, as soon as it is taken, do evince.

XXXVIII. But Precipitate, Arsenick, and Metallicks of the like Nature, &c. as they act plainly by a manifest, that is, by a corrosive Quality, so Treacle, which is properly designed for the Venemous bitings of Animals, and was invented therefore, will scarce alone do these any good; but Obtunders and Aswagers, fat Things, Oyl of Sweet Almonds, common Oyl, &c. serve instead of an Antidote. Therefore they who on the Stage do commend their Treacles by taking Mercury precipitate or Orpiment, do first fore-arm themselves with store of Butter. Then Precipitants of mountain Crystall and other things are given, which of themselves in a slight case might do good, for though they be given in a large Dose, and Nature do not ease her self by spontaneous Vomit, they are in vain; For neither a proportion between the Agent and Patient can easily be found, nor can the Antidote be so well situated by the Stomach, if the Stomach be ruined, and a mortal Eschar and a Gangrene be caused therein. Saturnines taken inwards, as leaden Bullets, do turn into a kind of *Saccharum*, and are corroded by degrees, upon taking Acids.

XXXIX. *Mercurialis*, writes, that to drink Water plentifully is admirable good for such as have taken Arsenick. He proves it first from the example of Dogs, which he put into Caverns, where Arsenick was, and when they were taken out lifeless, he poured Water into them, and they revived. Secondly from Mice, which, they say, escape, if they drink Water. But as I do not dislike Water, so *Forestus lib. 30. obs. 5.* seems well to disapprove of drinking cold Water, because it checks not the Poyson, but seems rather by its coldness to retain it in the Body: warm Water, drunk till one vomits, seems more convenient.

XL. It is queried, whether crude Cinnabar may be given? *D. J. Michailis* approved of it, but

depurated, which is to be valued in the most desperate Diseases, with a multitude of Symptomes; for though directly and of it self it be not a Diaphoretick; yet it is an useful Exalter, and a most pre-ent and safe Alexiterick. But Cinnabar of Antimony, say some, dissolved in warm Water, turns into a white Powder, of the same Nature with *Mercurius vite*: The native is easily turned into running Mercury, and so that back again into Cinnabar: And therefore since both of them retain their pristine Nature, they may cause the very same Symptomes, as Mercury either crude or prepared. But these Arguments do not at all deter me from the use of it; for first of all, that mechanick one of the transmutation of Cinnabar of Antimony with hot Water into white *Mercurius vite*, is false: Then grant, that Mercury may easily be got out of native Cinnabar, what then? Mercury tied up with the Sulphur of Antimony in the Cinnabar, is not at its Liberty, but being tied with the Fetters of the other, is then wholly free from these grievous Disturbances, which, either at liberty or entangled with corrosive Salts, it uses to raise, and it has those illustrious Qualities, which resist contagious and epidemical Diseases, and the Plague it self by a singular propriety (if it be worn outwardly.) And though this Cinnabar, when taken, yield not to the digestion of the Stomach, nor can be received into the economy of our Body; yet as long as it stays in the Stomach, it variously and admirably affects our Ardens by alteration.

XL. Many have taken notice what grievous Symptomes may arise from curdled Milk; but the Question is, whether a Vomit be convenient to get it out of the Stomach? *Matthiolus* denies it, and rejects a Vomit, because if one should endeavour to bring it up, it might easily stick in the Throat and choaka Man. But *Sennertus 6. pract. p. 8. c. 34.* prescribes Vomits, but after Things have been given to dissolve Milk, as *Oxymel*, *Mummy*, *Sperma ceti*, &c.

XLII. In a certain Village three had eaten of one Thing, and they were all Poysoned, and were taken with a violent Pain at the Stomach: One of them sent his Urine to me; which when I looked on, it was thin of Substance and of a green Colour, which gave some suspicion of Poyson: For a green Urine, according to *Avicenna l. 1. feb. 1. c. 2. doct. 2.* signifies a Convulsion in Children, or that Poyson has been taken. And if there be an *Hypostasis* (or settling) in it, there is Hope of Life otherwise there is danger. When he that brought me the Urine, had told me the Story, he increased my suspicion. Therefore I prescribe him a Vomit, and that he should also take fat Things, whereby, as I afterwards understood, he was presently freed of his Pain, and was cured: but another, before he could take any Advice, died suddenly: and the third, when he understood that I had cured the former, did after some delay send his Urine to me: I prescribed him a Vomit also of a decoction of Rhadish and *Oxymel*, and after he had taken Treacle, he was well. For Treacle is a common Remedy against all Poyson: I could not prescribe a proper Antidote; because I knew not what Nature the Poyson was of: but by these means their Pain in their Stomach ceased, and both of them were cured. ¶ *Cardan* Foretold cured some, that were dying of an unknown Poyson, by giving them Milk to drink.

XLIII. It is found by experience that a Mule, when his Guts are taken out, has such an attractive and dissolving Virtue, that it is able to extract and dissipate Poysons. As it was proved in *Valentine Borgia*; Pope Alexander the fifth his Son, who being enclosed in a Mule, which had its Guts taken out, immediately overcame the violence of the Poyson. ¶ In the year 1629. *Falcini* an Illustrious Patavine

Patavine, having by Gods mercy escaped great treachery, had a present of Wine sent him, which when he had tasted, he was long tormented with an Ulcer in his Stomach, and by Sylvaticus his advice, after *Valentine Borgia's* example he escaped, after he had been inclosed, in a Mule, whose Guts were taken out, the Poyson being drawn from within to the out-parts of the Skin. And an accident showed that the Wine was poysoned with *Mercury sublimata*, for as many as drank of it, found the Poyson, one of his attendants among others, after he had pissed Quick-silver (which, however it be prepared, is restored to its former shape by dropping some Spirit of Sale upon it) escaped.

Rhodius,
Cent. 3. Obs.
77.

XLIV. A Nobleman had a Son, who consumed away and at last died: After his Body was cut open, a certain hard mass, like unto horn, was found in the bottom of his Stomach, which was sent to his Father: He in memory of his Son caused a Spoon to be made of it, which he often used at the Table: It happened that when this Spoon was put into a Sallet of Water Cresses and Vinegar, it dissolved. Hence we may easily conjecture, that Water-Cresses has no common virtue against a *Philtrum*.

Schenckius.

XLV. We must know, there are three sorts of Diseases, which are held to come from Witchcraft. The first is no way Witchcraft, but when the Devil observes any one will be taken with a Disease, as he is well skilled in natural things, he persuades Witches and Wizzards, that if they will but do what he orders them, the Man will fall into such a Disease, into which notwithstanding he would have fallen, had the Witches done no such thing: And in the mean time the Witches think the Disease was caused by their power. Secondly, there are other Diseases, which indeed are not caused by the Devil, but by natural causes, while he changes the natural constitution, and corrupts and alters the Humours. Thirdly, there are Diseases, which are simply caused by the Devil, without the Mediation of natural Humours. As to the first sort of these Diseases, it is most manifest and without doubt, that it may be cured with natural Remedies: But the third cannot be cured by natural Remedies, because natural things can have no influence upon the Devil, who is a Spirit. And natural Medicines are good to cure the second sort, however they are not sufficient alone, but besides there is need of a divine cure. For since in such Diseases two causes concur, the Humours and such things as are in a humane Body, and the Devil besides; although the former cause be removed, yet unless the Devil cease from acting and hurting, a perfect cure cannot be expected. And these natural Medicines are either such as evacuate those vitious Humours, which the Devil uses in causing Diseases; or alteratives and Alexipharmacks contrary to the dispositions caused by him, amongst evacuants Vomits are chief, by which, it is evident, many stubborn Diseases have been cured, whose cause lay in the Stomach, Mesentery and thereabout: Therefore *Rulandus* cured *Demoniacs* by giving Vomits: for these vitious Humours being taken away, the Diseases, which by their means the Devil had caused to cease; Nor indeed must Purgatives be neglected. *H. ab Heer's* obs. 13. tells how one who was hurt with a Philtre was purged by Urine, and so cured. As to Alteratives and Alexipharmacks, we must observe that the word *Veneficium* is sometimes taken for Incantment, and an action absolutely magical; sometimes for a Disease caused by *Philtre*. Therefore when in Authors you find that this or the other Herb is good against *veneficia*, they are for the most part to be understood of secret Poysons, rather than of magical actions. For since there are common Alexipharmacks, they may very properly be used in these Poysons, whose natures are for the most part hid. Yea perhaps one may use them

with success even in Diseases caused by the Devil, seeing he also is able to cause poysonous Dispositions in the Body, which may be conquered by such Medicines. Yet in all these natural Medicines, both outward and inward, this must be observed, if we may use them (because often in occult Diseases we may try various Remedies) that they be used without all manner of superstition, ceremony, pronounciation of Words and the like, and that we rely only on their natural Powers, and leave the rest to God.

Sennertus.

XLVI. Because they say, that in these Mountains there is no small number of Witches and Wizzards, by whose Witchcraft several are oftentimes bewitched, I will therefore describe a true and proper Alexiterick to drive away such a Poyson, which I tried at *Geneva* with admirable effect in a certain Girl of *Lions* originally, about 6 years old, who had been long since bewitched by a certain Witch, she was almost quite emaciated, dumb, destitute of her motive Faculty, very voracious, who upon taking a certain Alexipharmack twice or thrice, and repeating it, begun both to Speak and Walk: A little while after her Father signified to me, she was perfectly well. And this Antidote is Dogs-tongue, yet not the common, but that which is described by *Dioscorides*, l. 4. And we have hitherto used the Leaves, not having yet tried the Roots. Now the Witch, who divulged this Alexiterick gave nine leaves to drink in Water; but we, neglecting the number of Leaves, ordered an handful to be boyled in half a pint of Water till half were boyled away, then we gave the Decoction to the Patient on an empty stomach. Afterwards one gave to another Girl at *Geneva*, bewitched almost in the same manner, half a drachm of *Morbans*, his Antidote in white Wine with good success, with which within a little time, after she had been purged upwards and downwards, at last she recovered. Because the virtue of this Alexipharmack is so great against almost all manner of Poysons, I think it not amiss to describe it; Take of root of *Valerian* half an ounce, root of *Swallow wort* 1 ounce, Polypody of the Oak, Marsh-mallow, wild Angelica each 2 ounces, fresh Garden Angelica 4 ounces, Bark of the Root of *Spurge Laurel* 1 ounce and an half. All these Roots must be digged up between the fifteenth of August and the eighth of September, according to *Morbans*, but the Antidote is found as effectual, though they be digged up later; When they are cut, let them be put in a glazed Pot, pouring on strong Vinegar, till it stand 2 inches above. Then let the Pot be close covered with a Lid, and let all the chinks be close stoppt with Flour and the White of an Egg well mixt together, then let them boyl a little, over a gentle Fire, in the Pot; Then open the Pot, cast away the Vinegar remaining, and let the Roots be dried, till they may be powdered: After, when they are all powdered, add of the Berries of herb *Paris*, and make a Powder, a drachm whereof at the most may be given in white Wine, to grown persons; for the weaker sort 2 scruples or half a drachm is enough. *Carrichter's* his Unguent, wherewith a bewitched Girl was cured; Take of Dogs greafe well melted and clarified 4 ounces, Bears greafe 8 ounces, Capon's greafe 24 ounces, 3 bunches of Mistletoe of the Hazle, while green, cut them to pieces, and bruise them, till they be moist, then pound them altogether, Wood, Leaves and Berries. Mix them all in a Glasse, which when you have set in the Sun 9 weeks, you will extract a green Ballame, anoint therewith the Places most pained, and the Joynts of bewitched Bodies, and upon certain experience you will Cure.

Jac. Auber-
tus Exerc. 42.
in Fernel. de
abditis rerum
causis.

H. ab Hee
obs. 8. rs.

XLVII. I have it from Dr. Geisfusius, that he knew a Man who had been long ill of a *Fistula* in his Thigh, out of which all manner of things came, Rags, Paper, Hair, &c. after many Remedies, had been used in vain, one, who was reckoned a Magician, strewed an ash-coloured Powder on the Wound, and the sick Man was cured in a few dayes. The Powder was the ashes of a Witch, that was burnt.

Joh. Doleus.
Misc. cur.
ann. 76.
obs. 61.

XLVIII. Concerning the Cure of poysonous and malignant Diseases *Eustachius Rhodius*, l. 1. de morb. occult. advises to consider, Whether the Body affected, when the Poyson seized him, were pure and entirely sound, or rather plethorick or cacochymick: for the Plethory and Cacochymie must be removed, before Alexipharmacks be used: and he shows, that this must be done very speedily in things very pernicious, and that kill quickly: but in those Poysons that will give truce, longer time may be taken. For he fears, that the Plethora and Cacochymie will weaken the strength of the Antidotes, and not suffer them to pass to the Part affected. And indeed it must be granted, that they are more in danger, who when they are poysoned or seized with a malignant Disease, do labor under a Plethory, Cacochymie or other inward Ail, for the reason aforesaid, and because the Poyson more easily diffuses and multiplies it self in vitious Humors, whence the Disease becomes more grievous: Yet I deny that in Poysons, which come to the Body from without, this advice should be followed. For seeing, we must ever oppose that first, which is most urgent, and that it is certain there is most present danger of Life imminent from Poysons, or that such an impression will be made, as cannot afterwards be got off, it is plain that the Poyson must first be opposed: for if we should first employ our selves in removing the Plethory, Cacochymie or Obstructions, the Poyson will kill in the mean time, or will so insinuate it self into the Body, that no Skill can afterwards expell it. But in Poysons, that will give truce, the advice is not to be rejected.

Sennertus.

Medicines especially made use of by eminent Physicians.

1. This is a most effectual Remedy, to eat Garlic and drink strong Wine, so that there will be need of no other Medicine, if a Man can but bear the use of them. ¶ A preservative, that one cannot be hurt by Poyson; Calamint taken every day does naturally resist all Poyson. ¶ This is a common Medicine, says *Strato*, which preserves from all Poyson; Take leaves of Rue 20, Walnuts 2, Salt 1 grain. Give this any man fasting, and no Poyson will harm him.

Ætius.

2. For eating of Mushromes; One gave Hen's dung finely mixt with Oxycrate or Oxymel, whereby the Patient found great relief.

Baricellus.

3. Against *Napellus* (or Monk'shood) the Plant that grows near the root of *Napellus*, which is called *Mus*. Half a drachm or a drachm of the root of this Plant may be given. It is an Alexipharmack for *Napellus*. A good Medicine also may be made of the great Flies, which feed on *Napellus*. ¶ Treacle or the powder of white water Lily is good against white Hellebore.

Capivaccius.

4. The Tincture of Emerald, or the Powder of it taken inwardly is the true Antidote against Toads.

Aug. Exe-
nis.

5. Quintessence of Vitriol is the chiefest of all Treacles, it expells all Animal, Vetegable and Mineral Poysons. The Dose is 1 drachm at any time in some Broth or an Egg.

Faber

6. A Physician gave a Boy, who had swallowed *Aqua fortis*, mucilage of Quinces to drink, and the Boy recovered beyond all expectation. ¶ For a Trembling from the fume of Quick-silver; It does a great deal of good, if the tremulous Parts be often washed in ones own Urine.

Forestus.

7. A drachm of Dittany in Gentian water with a little Zedoary or Citron seed, drunk fasting brought away a great many Lizards from one Man. ¶ The root of Walnut-tree, if the upper rind be taken off, and boyled in Water and Wine and drunk, is good to bring away Frogs in Men; as also the Powder of Bryony root taken in Milk.

Gabelshover
rus.

8. The following Experiment is highly commended by some; Take of the middle rind of Elder finely scraped, and a little dried in the shade a large handful. Pour half a pint of new Goat's milk to it, boyl it half away on a gentle fire; Drink a draught of it Morning and Evening. It is said, that all Poyson, which has been given a Man in his Meat or Drink for 3 years before, will be utterly extirpated. If it will not do at once, repeat it, till at length through Gods Blessing the desired Event succeed.

Grælingius

9. This is a most excellent Specifick against all Metallick Diseases, arising from Fumes and Damps; The Essence of Tartar, which is thus made; Take Liquor of Tartar, *Laudanum opiatum*, Oyl got out of Colcothar, which being distilled will afford a Liquor, 3 grains whereof for a Dose taken once in half a year is said to defend a Man from all poysonous Vapours of Metals. But for him that is already infected, abstract the Phlegm from the Vitriol, till it grow as sweet as Honey, and incline to a Purple colour. The Dose 1 grain in Speedwell water. Or let the Salt of Nettle be so long rectified in its Water in a moderate heat of Ashes, Sand or Balneo, till the fat of the Oyl appear, which must be separated from its Feces, 3 grains a day may be given for a Dose in Speedwell Water.

Kircherus

10. This is proved by certain Experience, if any one have swallowed Leeches, or eaten Mushromes, or any poysonous thing, let him immediately drink warm Vinegar with a little Salt, and he will presently be cured by Vomiting.

Kunrad;

11. Against Opium; Let Mustard and Castor be taken in equal quantities; and put into the Nose, to cause Sneezing.

Mercurialis

12. Treacle with *Oxymel Simpliciter* or *Scylliticum* satisfies all Indications; for none that ever took this after eating Mushromes died of them, but all through GOD's Blessing recovered.

Panazolus

13. A Decoction of Linseed corrects all Erosions of the Stomach caused by taking *Cantharides*; and it is reckoned their Antipharmack.

Platerus

14. Against Quicklime the Gall of a Roebuck from 1 scruple to 1 drachm taken in warm Water is an Antidote, as also a scruple of Deer's Gall given the same way. ¶ Against *Gypsum* 1 drachm of Mice dung in Wine. ¶ Against *Aqua fortis*, Mucilage of Quince seed; Marsh-mallow and Gum Tragacanth drawn with Rose water, and mixt with Honey of Roses and of Violets. ¶ Against Antimony (besides Treacle) bole Armenick and Oyl of Cloves. ¶ Against Arsenick, Fossile Crytall powdered 1 scruple taken in Oyl of sweet Almonds; also Oyl of Pine-nuts 3 drachms given in drink; also juice of Mint 2 drachms. ¶ Against *Minium*, burnt Ivory 2 drachms in Wine, also Treacle and Mithridate. ¶ Against crude Mercury filings or leaves of Gold; also juice of Burnet and Wine. ¶ Against its Fume, a draught of Wine, wherein Rosemary, *Stachas Arabica* and lesser Centaury have been boyled; as also a draught of Sage and Zedoary water. ¶ Against sublimated

sublimated

sublimate and precipitate, fine powder of Cryſtal 1 drachm with Oyl of ſweet Almonds; alſo 2 drachms of Oyl of Tartar or ſalt of Wormwood. ¶ Againſt Cinnabar, burnt Ivory 2 drachms given in Wine. ¶ Againſt Muſhromes, Hen's dung or aſhes of Vine-branches with a little Nitre drunk with Honey and Water warm: Sowre Pears are commended, whether green or dry; and if they be eaten before Muſhromes, or boyled with them, they render the Muſhromes harmleſs: Treacle alſo is good: But let a Man eſpecially uſe Honey in his Meat, which is a peculiar and proper Antidote againſt Muſhromes. ¶ Againſt *Napellus*; Take of the Flies of *Napellus* (they are blew Flies which fit and live upon no other Plant of the like Nature with this) No. 20, Birthwort, Bole Armenick each 1 drachm. Make a Powder. ¶ Againſt Wolf's bane, *Opobalsamum* 1 drachm. ¶ Againſt Henbane, Piſtachio-nuts eaten and drunk. ¶ Againſt green Coriander, roots of Swallow-wort in Wine. ¶ Againſt *Euphorbium*, Citron ſeed in Wine wherein Elecampane root has been boyled, alſo *terra ſigillata*, Emerald, prepared Cryſtal, &c. ¶ Againſt white Hellebore, powder of the Flowers or roots of white Water Lily, or Parſnep ſeed 2 drachms taken in Wine; alſo Treacle. ¶ Againſt the bite of a Viper, Bezoar, from half a ſcruple to 1 drachm boyled in Wormwood Wine and given: Alſo Garlick, Leeks, Onyons, Rue, Treacle, Mithridate, *Antidotus Matthioli*, which ſome highly commend, the Doſe is 3 drachms in ſome Cordial water. ¶ Againſt a Scorpion, beſides the live Scorpion, taken and bruised, and applied to the Wound, and Oyl of Scorpions, the Milk of a Fig-tree dropt into the Wound is good. ¶ Againſt the biting of a Leech, Agrimony bruised and applied. ¶ Againſt a Spider, the Catkins of the Walnut-tree dried in an Oven from 1 drachm to 2 given in Hydromel or white Wine; alſo Treacle and Bole Armenick taken in Vinegar; alſo the dry Refin of the Fir-tree. Againſt *Cantharides*, Penny royal taken either in Subſtance or in Decoction; alſo *Terra Lemnia* 2 drachms, or Winter Cherries No. 10 with Wine. ¶ Againſt the Venome of Flies, Bees and Waſps, the Animals themſelves bruised and applied to the Part; alſo live Sulphur mixt with Man's ſpittle, Rue, or the Milk of the Fig-tree applied to the Place. And, if there be need, Coriander may be given inwardly with Sugar. ¶ Againſt the Brain and Blood of a Cat, half a ſcruple of Muſk taken frequently. ¶ Againſt Milk curdled on the Stomach, Vinegar ſimple or of Squills; alſo the juice of Mint new drawn; alſo Milk of the Fig-tree given with Wine and Vinegar, alſo the Runnet of any Animal. ¶ Againſt the poiſonous Sweat of any creature; Take Bole Armenick, *Terra Sigillata*, Bay-berries each 1 drachm, the Runnet of a Roebuck, or inſtead of it, of an Hare half a drachm, Myrrh, leaves of Rue, each half a drachm, with clarified Honey make an Eleſtuary; Take 2 drachms every day.

Sen. Tertius.

Vid. Vidiuſ.

15. All things premiſed that ought, it is the beſt way to drive out the Poiſon to the Skin; to which purpoſe this is a moſt excellent Water; Take of *Aqua theriacalis camphorata* 1 drachm and an half, Liquor of Tartar corrected, Spirit of Vitriol each half a drachm, the oily Liquor of red Corall 1 drachm, Oyl of Turpentine 5 drops, of Juniper 4 drops, Eſſence of Celandine half a drachm, Water of the root of Coltsfoot, Eryngo each 1 ounce, of Elder flowers, Wall Gillflowers each half an ounce, red ſweet Wine 2 ounces and an half. Mix them. Deſtill them in *Bain-marie*. Keep it for uſe.

Ventriculi affectus, or Diseases of the Stomach.

(See Stomachicks Book. XIX.)

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Emulsions sometimes do hurt. LXV. LXVI.

The way to cure a cold Stomach, when the Liver is hot.

LXVII.

Med. cines.

I. **W**hen the Stomach is affected, it is much controverted to what part Application must be made: *Rondeletius* makes it to the back part, about the thirteenth vertebra: Others to the fore part, towards the region of the Liver: *Amatus Lusitanus* contends that things must be applied to both. But in applying Topicks to the Stomach, we must mind what *Joubertus* has observed, whether the Liver labour under the like Intemperature with the Stomach: for if under a different, the Region of the Stomach must not be anointed before, upon the cartilage and *hypochondria*; because if the Liver be first affected, so will the Stomach after, when it receives the quality impressed on the Liver. That this inconvenience may be avoided *Joubertus* had rather anoint the Back over against the Stomach: But because the thickness of the vertebra and other gross parts is such, that it hinders the penetration of the Medicine to the Stomach, it is better, he says, to cure all Diseases of the Stomach by Medicines taken inwardly, whose action is the quickest, for they presently reach it in their full strength, and affect in the inner Part: But it is not so in things that are applied, unless a like Intemperature of the Liver and the Stomach fall under Cure; except in the coolness of the Stomach, which proceeds from the heat of the Liver; for when the Liver is cooled, the Stomach quickly returns to its Temper.

II. The things that are applied to the Back, must be of subtil Parts, that they may penetrate through the thickness of the way.

III. Plasters applied to the Stomach, according to *Galen*, 7. m. m. must not be kept long on because at length they will dissolve its Heat.

IV. As for things to be applied in a moist Intemperature, we must observe, that if Driers be also temperate in the active Qualities, and not astringent, they may be applied to the Stomach so as to reach the Midriff: But if the drying Medicines be cold or astringent, they must not be applied to the Midriff: for respiration would be hurt.

V. Not long since an ingenious person made use of a long, soft flexible Wand, to which was tied a brush of Lint, which when he had a mind, he put down his Throat into his Stomach, to scour the Stomach, and the filth of it, and he drew it out again without Vomiting. If any will follow this mans Example, he ought to have a care that he break not his Wand, and that the brush stick not in his Throat.

VI. The bottom of the Stomach sometimes is wounded and cured, yea it admits of Incision, so as Iron, or any other hard thing may be taken out, when it can neither get up nor down, and hurts a Man.

VII. Very little Meat must be given them, who have any Disease in the Stomach: because seeing

it, being the Part affected, must make the first and greatest alteration in the Meat, and must contend with a great deal of crude Meat, it is plain that the Stomach will be very much hurt thereby, and therefore a Disease therein will not admit of Meat, and for that reason must never be given, unless necessity force a Man to forget its hurt.

VIII. If the Intemperature be different between the Mouth and bottom of the Stomach; so that the bottom is cold and the Mouth hot, the way of Cure is easie, and it is twofold, First at the beginning of the Meal to give hot Things; in the latter end cold and austere ones: Secondly, let hot Things be applied to the fore-Part of the Belly, and cold Things to the hinder Part, about the twelfth vertebra: for there is the Mouth of the Stomach. But if there be an inequality between the Coats and the Humors so as the Humors are hot, and the Coats cold, as it happens in a very hot Liver; we must first carry off the hot Humor, either by Vomit or Stool, which yet may both heat and also purge Choler; such are *Hiera simplex*, *rheubarb*, *aloes*, and *worm-wood-Drink*, which purge Bile, and heat the Coats of the Stomach. If the Intemperatures be unequal in respect of the passive Qualities, so that the Coats are dry for want of substantial Moisture, and yet an excrementitious phlegmatick Humor abound, this is the difficulty. In this Cure, before all things, the Humors contained in the Cavity must be carried off by gentle Medicines, which may moisten, moderately heat, and may rather be alimentary than medicamentous; such are *Manna*, *mel violarum solutivum*, *Cassia*, *Myrobalsans*, *Chebuli*, one or two of which may be given, if they were preserved in *Syria*, (Observe the distinction; If they were preserved at *Venice*, when you pierce them they make a noise: If in *Syria*, not) When the Stomach is purged, it is necessary afterwards both to moisten and dry it. I use to do this several wayes, first when I give Milk, I drop into the Milk 5 or 6 drops of oyl of *Aniseeds*, or *Fennil* or *Cinnamon*; or, if there be suspicion of the Pox, of *Guaiacum*: Sometimes I use *Hog's blood* distilled hot, mixt with a little *Cinnamon* water. All these things moisten, nourish and also dry.

IX. Since the Stomach is all membranous, cold and dry, it scarce ever primarily and of it self labors under a hot Intemperature. Whenever therefore signs of its being hot show themselves by inquenchable Thirst, desire of cold Drink, blackness and driness of Tongue, refreshment by cold Things whether taken, or applied, offence by hot Things, nidorous Belchings, loathing, bitterness of the Mouth, and loss of Appetite, the neighboring Liver must be blamed, from Sympathy wherewith the Stomach is easily affected; for seeing it lies close to the Liver, the Liver easily communicates its Qualities to it.

X. An Intemperature of the Stomach with an Humor, whether it be from a cold or an hot Cause, must be corrected by premising a gentle Vomit. For so we may more easily discharge the mass of Humors, which is continually breeding there, then if we should use Purgers. Moreover by that means the Humor sticking to the folds of the Stomach is more easily cleaned; and the Intemperature, if it be not either innate, or very inveterate, is corrected.

XI. Seeing in a cold Stomach, full of Phlegm the Indicant continues a long time, we must therefore a long time and every day use Medicines for it, if Strength will permit. And the Strength permits the frequent use of hot Medicines, which are not unpleasant, as *Diatrion pip. diacalam*. Which we may use every day; but we

cannot use *Hiera* constantly because of its bitterness. Yet we must not be too sparing in the use of *Hiera*, when Matter is sticking in a cold and moist Stomach: Especially if *Hiera* be made with 80 drachms of Aloes and not 120 drachms. Therefore the Apothecaries must be ordered to have *Species Hiera* made 2 ways: For when we would prepare the Body, *Hiera* of 80 drachms is most effectual; If 2 scruples or a drachm be taken, and made into a *Bolus* with Sugar or Honey, and given frequently; for this is a most wholesom preparing Medicine.

Cappivaccius.

XII. Whether may we give a Purge to a weak and cold Stomach, which concocts slowly and ill, and is also full of cold and gross Humors? For we may strengthen no Part, when it is full of ill Juices: but it is known, that a weak Stomach cannot well bear Purgings. Yet this must be understood of strong Purgers: for such as Purge gently, as *Rheubarb*, *Hiera Simplex*, and *Myrobalan*, may without harm be born by the Stomach, though it be weak.

Zecchius.
Conf. 18.

XIII. As to a cold Intemperature, seeing hot Medicines are approved of, two things must be observed concerning them. 1. That they be not violent Heaters; Therefore Ginger is good, but it must be preserved in Sugar: And *Diatrion Piperacum*, but with Wine: for Honey, Sugar, and Wine moisten substantially: so Pepper is good, but with Meat. 2. We must observe, that Astringents be mixt with Heaters, lest the substance of the innate Heat be wasted: therefore *Avicen* mixes a little *Mastiche* with a decoction of Spike. As to Things applied outwardly, we must observe a difference between hot and cold things: for cold things are prohibited by the innate heat of the Midriff; but not hot things: Yet if it happen that the Part adjoining be affected with a hot Disease, it is safer to apply hot Things about the Navil and the left side because in the right side the heat of the Liver might forbid it. ¶ Things that heat immoderately dissolve the innate heat of the Stomach, and at length cause coolness, as is evident in Girls, that eat Ginger and such things; for therefore they are Pale. ¶ Chymical Medicines, seeing for the most part they have a sharp and a very hot Quality, can be of no use in case of a cold Stomach, especially when the Liver and Parts thereabout burn with immoderate Heat: therefore *Aristot.* 24 probl. sect. 13. When he asks, Why hot Things are sooner cooled in the Sun than in the Shade? He answers, that the less Heat is wasted by the greater. And *Galen* 3 de morborum causis says that a less Flame fades by little and little, if you hold it to a greater.

Cappivaccius.

Rondeletius.

Crucius.
de Quasit.

Willis.

Heurnius.

Walus II.
Hofmannus.

XIV. Have a care that you give not Wormwood Wine when bad matter lies mixt in the Stomach. ¶ But it is good in a cold and moist Intemperature. XV. He that afflicts a weak Stomach by Heaters, as soon as he sees the Urine grow red, must immediately abstain from hot Things, otherwise a Dropsie follows.

Mercatus.

XVI. Things that have Vinegar in them must not be used indifferently in every crudity: for I find it is only useful, when too much Moisture, and that thick, is joyned with heat, at which time it must either be much dilated or mixt with cooling and lenient Things. XVII. That Concoction may do its Office without any fault, things that bind the right Orifice of the Stomach, must be taken after Supper; that the Stomach may be the stronger contracted, and may perform its Action more exactly. And *Rondeletius* says, that they greatly mistake, who give hot Powders after Meals, for by their heat and tenuity they immediately carry with them the Aliment half crude to the Veins, whence obstructions arise.

XVIII. Medicines are made of Confections and Powders to strengthen the Stomach: But it is much better to give them in form of a Powder without much Sugar, for Sugar and Honey, and other sweet Things make lax the Stomach and breed Wind, especially when there is not much Moisture in it. *Rondeletius.*

XIX. Pepper is of a very thin Substance, and so for a time it heats the Stomach, and its Virtue is immediately spent, as all tenuous and hot Things are. *Galen* commends Pepper very much, wherefore I could heartily wish, the moderns were wiser, who, when they find *Galen* gave Pepper with *Prisan* in a Fever, think that *Galen* was out, and they say, it were better to use Cinnamon; and so they order Cinnamon. But they do not see *Galen's* mystery, that Pepper heats the Stomach and not the Liver. And *Galen* 4 de tuend. valetud. says that *Diaspilot*, *Diacalam*, and the like, are very bad for a crude Stomach, because they carry crude Humors to the Liver and cause Obstructions: for although there be not so great a heat in Cinnamon, yet it is more lasting. Therefore I often give Sugar of Roses, bruised very finely with a little Pepper, that it may more easily exhale. *Montanus.*

XX. *Celsus* l. 2. c. 24. reckons the drinking of cold Things to be grateful to the Stomach: and it appears from other places, that drinking cold Water is good for the Stomach: So l. 4. c. 18. he gives warm Water to them that are ill at their Stomachs: He adds, And hot Water, for as lukewarm makes lax the Stomach, and causes Vomiting, so hot Water strengthens the Stomach. Therefore *Plistonius* in *Athenaeus*, to strengthen the Stomach, orders Water to be drunk very warm, in Winter especially and in Spring, and cold in Summer. And *Celsus* l. 4. c. 3. when the Stomach will not retain the Meat, says, it is best either to drink Wine cold, or else very hot. Which yet must so be understood, as, when the stomach is either empty, or full of Phlegm, we must abstain from cold Things, which according to *Hippocrates* are enemies to the Nerves; and then hot drink nourishes the innate heat, and concocts crude Phlegm: but when one is full, then he must use cold Things, wherewith by *Antiparistasis* the heat is gathered and made stronger. *Rubius. comm. in Isac.*

XXI. I have known some who have endeavoured to consume and dry up the matter with Oyl of Vitriol, because it most violently dries and cleanses; and indeed at first the Patients find benefit, for they perceive by using of it, that the Stomach is astringed, their appetite increased, and the matter of the Fluxion abated; but I know at length they have become Cachectick, to say nothing of other Diseases. Truly I have ever suspected the caustick Virtue which remains in that Oyl, prepared even according to the Doctrine of *Paracelsus*. I have indeed used it sometimes in Diseases proceeding from very crass Phlegm: but I would persuade no man by the continued use of a few drops to spoil the moderate heat of the Stomach (which is designed for Concoction) and corrupt the goodness of the Blood: For if we may make our conjecture of internals from externals, what is it that boyls in the Chimney, but heat? And that Acids corrugate the Mouth of the Stomach, and excite Appetite, we know from the use of Vinegar. Such therefore as constantly use this Oyl, although they may flatter themselves for a time in the goodness of their Appetite, and drying up of Defluxions; yet at length, and in process of time, they are forced to acknowledge, to their sorrow the harm done to their Stomach and other Parts. *Gr. Hofmannus.*

XXII. For

XXII. For strengthening of the Stomach Chymists likewise commend Spirit of Vitriol of *Venus*, which they call the Hungry Acetosity of *Venus*, or Spirit of Hungarian Vitriol. And they write of it, that it is of such Virtue, that it consumes all the Impurities that are in the Stomach, whether Tartareous or Sulphureous, and strengthens the Stomach so much, that it is able to concoct all things. But all this is hyperbolic; And though it be often given with advantage; yet Caution is necessary, for it must not be used in every weakness and Disease of the Stomach, but where there are gross and tartareous Humors, which it consumes, and afterwards by Astringent strengthens the Stomach. But we must have a care, that we do not over do it, and that the radical moisture of the Stomach be not dissipated and wasted by it, which often happens upon the unseasonable and excessive use of Spirit of Vitriol.

XXIII. All strong distilled Things must be avoided; which seem indeed to do good; but they shorten life, because they far exceed the degree of innate heat, and all Remedies ought to consist in Mediocrity. For the gentlest Medicines in a diseased and languishing Stomach want not danger, especially in old People.

XXXIV. It is the Custome of some, that if at any time they eat any thing hard of Digestion, or that will surfeit, presently to drink some generous distilled Water, as *aqua vite* or the like, to help Concoction; but this is done not without hazard of Health: for seeing the said Meats use not to be digested but by a long stay in the Stomach, such Waters as these do by their penetrating and permeable Virtue carry these Meats, not yet well concocted into the Veins, whence proceed crudities and obstructions. Thus Physicians do a right forbid the giving of Diureticks with Meat or immediately after Meat, lest they carry the crudities of the Stomach to the urinary Passages. And the reason is the same in Waters that are taken to promote Concoction, because of the great aperient Virtue, they are induced withal. Therefore *Rondeletius cap. de palpitatione*. "We may, saith he, give such things inwardly as heat the Stomach, and discuss Wind; which thing must be observed, for 3 or 4 hours before Meal we may give things that heat much and discuss Wind, so the Liver be not very hot, such as *diatrion pip.* *dianis. aromat. rosar. diagalanga*, and the like: "These things should not be given immediately before Meal, because by their heat and tenuity they would presently hurry with them the Aliment half crude to the first wayes. "Hence it is evident that they are in error, who give very hot Powders after Meal, which should be moderately hot. *Ætius l. 3. ferm. 1. c. 24.* says; neither this nor any other Medicine which penetrates much, must be taken after Meal: for some crude Meat is distributed and digested with it, and causes Obstructions. The use of it is convenient after rubbing in the Morning, two hours before Exercise and Bathing. What we said of things difficult of Digestion, is applicable to things easily corruptible, such as horary Fruits. They are likewise in an Error, who when they find Wind and Crudities upon their Stomachs, drink these Waters, to heat and strengthen the Stomach; for by the tenuity of their substance they easily penetrate into the Bowels, and increase their Intemperature, whereupon their Disease afterwards encreases. You will object, Physicians prescribe Pepper bruised grossly: and that *Ætius* used Wormwood for hypochondriack Winds; but Pepper doe good this way, because it reaches not to the Bowels, but only strengthens the Stomach, and therefore heats not the Liver: Then its heat is extinguished and quickly dissipated in the first wayes, and it cleanses and carries off sharp Humors. Worm-

wood is good, because it binds the Stomach, and helps bilious, not phlegmatick Humors; which afford matter for this Disease, by its detersion, and carries them off by stool and Urine.

XXV. This must be observed concerning those they call digestive Powders, that too strong things are not convenient in Diseases of the Head, caused by Fumes. It is best therefore to make them of things, that are not much scented, and to abstain from such things as have Musk, Amber, Saffron, and other Things that fly to the Head, in them. But I blame such as put Liquorish in them; for although it quench Thirst, and have a little Astringent in it, yet sweet Things make lax the Mouth of the Stomach, and breed Wind. I also blame them that add Nutmeg and Mace, because they are oily Things, and all such subvert the Stomach: It is not amiss also to add Fœnil and *Seseli* seed to Powders that discuss Wind, and to digestives ones as also to other Powders, because they attenuate the visory Spirits, but we must be sparing in the use of Cummin, Carroway and Rue seeds, because of the too ingrateful taste of Cummin and the too great acrimony: Let them be steeped in Vinegar, if Powders be made for digestion of Meat.

XXXVI. The breeding of much Matter in the Stomach will be hindered if the Patient immediately after Meat, Morning and Evening swallow 2 or 3 grains of Mastich whole, or 1 scruple of juice of Wormwood condensed in Pills. For things that heat the Stomach, if they be taken before Meal, hurt the Liver.

XXVII. I have learned by Experience, that green Wormwood worn within the Shoes amends the cold Intemperature of the Stomach, with much benefit in the Noble Lord N. who declared openly, and seriously affirmed, that he found much benefit by treading upon it.

XXVIII. I knew a Man, who had a cold Stomach and an hot Liver, and had very hot Plaisters and Unguents applied to the *cartilago xyphoides*, upon which he was taken with an Inflammation in his Liver, and could hardly be cured of it. If any one desire to enquire the cause, let him look upon the Anatomy of the Liver: for with its hollow side, from the right to the left, its covers almost the whole fore-part of the Stomach, so that hot Medicines first come to the Substance of the Liver, before they come to the Stomach.

XXIX. Wine taken in too great a quantity, not fine, nor exactly depurated from its Tartar and Lees, is very hurtful, both because by the continual and immoderate use of it the innate Heat is destroyed, and Concoction is hindered in the Stomach, especially of Flesh, which hardens in that liquor; the Liver is hurt, a sharp and serous Blood is bred, the Brain and Nerves are weakened, Catarrhs are caused. &c.

XXX. Never give an austere Wine to a dry Stomach, for it hurts the substantial Moisture, for which nothing is worse than Astringents, which feed upon what Moisture there is. Therefore in this case store of moist Things must be given, Broths, Milk, almond Milk, that the dried Coats may be extended, when moistened, and so may close well upon the rest of the Meat.

XXXI. There is a way found, whereby the noxious Vapor is taken from the Wine, that is, by letting it pass through a double glass Instrument, the French call it *Montevin*. This way also it is deprived of its superfluous Tartar, that is, by putting to it some Liquor, that has a precipitating Virtue, such as Oyl of Tartar (by means whereof egre Wine grows sweet) a solution of Litharge, or *Saccharum plumbi*, made with Vinegar,

Mayerne.

a solution of calcined Crystal, by frequent extinctions in Nettle water, and reverberations, with acid Spirit of Turpentine.

Noëferus.

XXXII. When crudities are bred in the Stomach by reason of Surfeiting, it is not advisable, as many do, to remove it by fasting; but it is better the next day betimes to take some delectable food, but in a small quantity: for Nature being delighted at the approach of new food, that is grateful, undergoes the work more chearfully, and turns what is good into aliment, and separates what is bad and crude into excrement, by the help of the expulsive faculty: Wherefore many after a surfeit are taken with a Loosness.

G. Hofmann.

XXXIII. In some People, only an heaviness like a Stone, with shortness of Breathing shew, that there is slow concoction: I tell such, they may safely sleep after Dinner: In others there is a certain fluctuation or vibration, or trembling, or palpitation, sometimes with, sometimes without a rumbling in the Guts, and with shortness of Breath: such may with much more reason sleep after Dinner.

XXXIV. Galen 3. de causis Symptom. c. 1. shows, that an acid corruption alwayes comes from a cold intemperature. And 1. de loc. aff. 1. that a nidorous corruption, when it comes from intemperature, alwayes follows a hot intemperature, yet both these corruptions are caused by external errors: The acid indeed, by excrements, in their own nature acid, as acid Pulegm, acid Melancholy: Or by Aliments, offending either in quantity or quality: In excess, when they suffocate the native heat, though it be strong: In quality, if they are either too cold and moist, as thin Wines, moist Fruits, &c. or when they easily putrefie, as Milk, Pufan, &c. or when they are of an austere taste, as Services and Medlars, which by further concoction are changed into an acid taste. And although Galen 7. Simpl. c. 8. write, that an austere is changed into an acid from encrease of moisture; yet it cannot be denied, but that the same may be done by excessive heat: for he writes, that adust Melancholy is made acid by burning heat: so in the Summer time austere fruits are turned acid by the heat of the Air. Gather from hence, that corruption into an acid in the Stomach is not caused only one way, nor by one cause: And therefore Trallianus l. 7. c. 16. says well, that a corruption to an acid is sometimes caused by a hot intemperature, and cured by cooling things. Therefore the turning of Milk or small Wine fowre, which are moderately hot and do easily putrefie, is not caused by a weak heat in the Stomach, but by a very strong one, which consumes the innate heat of the Milk, or Pufan, or any such other Body. The case is the same in a nidorous corruption: for the meat is so corrupted either by the Aliment or Excrements: By Excrements abounding or deficient: The abundant are either Cholerick or Melancholick, which by their heat burn the Aliment and turn it into a Nidor: The defect of Humours, is defect of Phlegm: For Galen 3. de nat. facult. c. 7. when he mentions things that help concoction, as Bile, Heat, Spirit, reckons up the whole substance of the Stomach and Phlegm. No man has declared how Phlegm helps concoction; but this is my Opinion; Concoction in the Stomach is a sort of Boyling, this is not done without moisture, therefore Phlegm conduces to Concoction, as it is a moist matter, whereby boyling is made; therefore when this fails, meats easily turn into a nidor. Nor let any one say, that Drink serves instead of Moisture; for Sagacious Nature hath therefore made the Stomach the storehouse of Phlegm, that if drink be wanting, the Aliments may not be burnt, which they may easily be, if but a little in quantity, or hot and dry, as sharp and aromattick things: or if they be sweet, as things with Honey in them, fried things, and the like.

Saxonia.

XXXV. They are deceived, who think depraved concoction, pituitous vomit, fowre belchings and wind have only a cold cause; for oftentimes an hot Liver causes these Symptoms: because when this is hot, the Stomach concocts badly; Neither must cold and moisture be presently blamed; nor must we, after the manner of Empiricks, presently fly to hot things. But we must diligently search, whether a cold or hot cause waste its strength, that it may be opposed by a contrary Remedy. When therefore a hot intemperature of the Liver is a cause of depraved concoction, it must be opposed by things that cool and moisten the Liver, whereto may be added things that strengthen the Stomach with a gentle attrition, Wine and other hot Aliments must be avoided: For it is found by experience, that crudities of the Stomach, and destillations arising from the heat of the Liver, and the exhalation of bilious Blood, are very much exasperated with the use of generous Wine and such things, and abate with the contraries. ¶ Now most Physicians have only one intention in weakness of the Stomach, while they fly to astringent, hot and bitter meats, to Wormwood Wine, heating and astringent Plasters and Unguents. Innumerable People at Venice, having their Stomachs polluted with divers Humours, and ill of Hypochondriack Melancholy, wear hot things constantly upon their Stomachs, and take strengthening and hot things, supposing it to be a cold intemperature. Nevertheless their Liver is very hot, their Spleen and Mesentery are laden with Melancholy, whence comes wind in their Belly: And they think they do good with these hot and astringent Medicines, when they encrease their misery. But Galen says plainly, that he has eased Diseases of the Stomach by drinking cold water.

Enchir. Med. Praë.

Sanctorius.

XXXVI. Johannes Riolanus has observed, that when the Colon is full of feces, the Stomach labours under difficulty of Concoction. Therefore the excrements must often be got out by Clysters.

XXXVII. Among the Diseases of the Stomach, the most common is the laxity of it, which may come from any intemperature. One man, when he had been long troubled with this Disease, and many had had him in hand, but none could find a Remedy for him; when he came to me, I easily knew by the Medicines he had taken, that the Physicians thought he was ill of a cold intemperature. And I from the preceding cure, and other evident reasons, thought quite otherwise, that his Stomach was ill of a hot intemperature; Wherefore having recourse to such Remedies, as his dry Body, now almost consumed away, seemed to require, the first day I ordered him only to eat some Lettuce out of Oyl and Vinegar, which when he found beneficial and proper for his Stomach, I order him to leave off Bathing, Frictions, Exercitations, especially of the upper parts, all unctious and hot meats, which he had hitherto used; and rather to turn himself to meats that are cold and difficult of concoction; wherefore I recommend unto him Mutton rather than Fowl or Fish, unless of a hard sort, in this sickness of his. I tell him that cold and austere Wine is the properest drink for him, and that a hot and thick Wine is most improper. To which when he gave way, and carefully observed his directions, using only this sort of diet and cooling Medicines, he was as well, as ever he was, within two Months.

Benivenius.

XXXVIII. The dilatation or resolution of the Stomach is a Disease very frequent, both in healthy and sick People, when its tone is so loosened, with broths and cold drink, and much moisture, that a Loosness follows thereupon, which is attributed to corruption of the food by a hot intemperature of the Stomach, or to the obstruction of the Mesaraick Vessels: which is rather a Symptome of too great laxity (Fernelius his Disease of Matter) which must be

be cured by strengtheners and astringents. In some after their death the Stomach has been found so lax, that it would hold a Childs head. Therefore the observation of Diseases of matter is very necessary for practice, which are cured by astringents and driers, taken inwardly, and applied outwardly, according to the doctrine of the Methodists, who make Lax and Strict to be in Diseases.

Riolanus.

XXXIX. A great heat of the Stomach well concocts hard things and difficult of concoction, as hung Beef, Cabbage and such things. The same heat corrupts tender meats, as Eggs and small Fishes. The cure in these is to change Diet. ¶ I knew two, that were ill of heat in the Liver, and of bile boiling in the Gall-Bladder, which caused inconcoction. A cold intemperature of Stomach was blamed in them, whose heat languished, being wasted by the hot Liver. Many hot things had been used in vain to help concoction. The first of these Men was the Illustrious Monsieur de Molondins, deputy Governour of Newemburg: He was much troubled, to his dying day (which happened in his sixty third year) with a heat in his Stomach, especially if he eat meats easie of concoction, or several things to his Supper: The Chyle fomed up, during concoction, and was almost all brought up in Spittle: If he eat only of one meat, or of what was difficult of concoction, the concoction was performed aright without any disturbance. The other was Gedeon des Bergieres, who till the fortieth year of his age was troubled with such a spitting of a viscid and tenacious matter, the heat of the parts about his Stomach abating afterwards, in the process of his age, he lives free from any such hurt, and now digests very well.

Hofmannus.

XL. The coldness of the Stomach is not alwayes positive, but often privative, from the heat of the Liver and Hypochondria. Therefore Galen primo de loc. affect. 4. has told us, that when concoction in the Stomach is bad, we must presently consider the parts about it, which if they be very hot, it is spoiled by them, but the heat of the Stomach it self is not abated. And although Aciditie be often perceived, yet it proceeds not from cold but from excessive heat, as the primary and chief cause, as Trallianus considers, and it is found by dayly experience, that Wine in Summer in the heat of the Sun turns fowre. ¶ The heat necessary for concoction must be plentiful, sweet and moderate, boiling not roasting: Otherwise, if it be exuberant, it either turns the food to a Nidor, and causes difficulty of concoction, or, as a great flame, it dissolves and wasts the Stomach, and so spoys concoction: Yea, in process of time by drying up the fleshy parts of the Stomach, without any diminution of the innate heat, it weakens it, whence comes ill digestion. Therefore Galen 3. de nat. facult. said, that beside other causes, that concurr to concoction, the whole substance of the Stomach is one. So 2. de aph. 35. he sayes, it is well if the parts belonging to the Stomach be fleshy; therefore the thinness of the Coats hinders concoction: For a lean Stomach alwayes concocts worst. Wherefore 3. de Symptom. causis, he concludes, that natural Organs, the moister they are, so much they are fitter for nourishing; but the harder and the drier, the more unfit.

Fortis.

Idem.

XLI. The diagnostick of the Humour, that causes the pain in the Stomach, is taken from the time of the invasion, increase or abating of the pain. Some have the pain most before meat, and this signifies the dominion of bile, which is exasperated in time of fasting, and drawn into the Stomach, or grows sharper. In others the pain arises immediately after eating, because the crude and biting Humours which before were quiet, and fixt to the coats of the Stomach, are disturbed upon eating, or they that are in the bottom of the Stomach, rise up and affect the Mouth of the Stomach. In others

the Pain encreases, while the meat is concocting, because sharp and biting Vapors are elevated from the morbidick matter, by encrease of the heat in the Stomach, at the time of concoction. In others 4 or 5 hours after meal, because the meat is corrupted after ill concoction, and being corrupted, it vellicates the Stomach. And in some the pain is encreased after sleep, and that is caused by a Catarrh, the Humour flowing from the Brain in sleep, which being gathered in great plenty, produces pain, when waking. And sometime the pain is asswaged after meat, because the acrimony of the Humour is sweetened with the kindliness of the meat.

Riverius.

XLII. If the Blood be not transmittted by the Liver, it being distended with plenty of Blood, will press upon the Stomach, and will cause a most grievous pain in it, and especially after meat it will be so complicated, that the pain can be eased neither by Remedies taken inwardly nor outwardly. As I saw it happen to N. who could not be eased of such a pain, after all had been done, that could be done, otherwise than by the benefit of Nature: For when he was grievously afflicted with it immediately after meal, behold! all on a sudden, he vomitted up much Blood, which presently eased his pain: For which ever after, as often as he was troubled with it, he was let Blood, and it cured him. The History in Hippocrates Epidem. is not unlike this, of a Man, who in a violent pain of his Stomach, could be eased by no other Remedy but by Bleeding.

Joh. Doory.
netus.

XLIII. A certain Matron, who had complained two years of a pain at her Stomach, and could be cured by no Remedies, at last upon taking a Vomit, she brought up a piece of Bacon skin, which she had eaten two years before, and she was well quickly after.

Fabr. Hilde-
nus.

XLIV. Concerning Hiera, which Galen commends in pains of the Stomach, arising from cold matter or wind, we must observe, that it operates slowly, and while it acts upon the viscid matter cleaving to the coats of the Stomach, Wind being thereby raised, it causes the Belly to swell, and the pain to encrease; therefore it is advisable to mix some other purgative, which may encrease the strength of the Hiera, and quicken its operation.

Sennertus.

XLV. In pain of the Stomach, where there is need of Purging. J. Navius according to Scholtzius, gives a Purge with corrected Opium mixt with it: For so he eases pain by causing Sleep: And the Medicine carries off with it the bad juices, contained in the Stomach, which caused the pain; and he sayes, it was formerly Lud. de Leonibus his secret. Frambesarius also in cons. f. 362. in grievous pains, where there is need of Purging out the continent cause, commends the giving of Narcoticks in Purges. Riverius commends this; Take of Diaphen. half an ounce, Philonium Romanum 2 scruples: with Chamomil water make a potion.

Hocerus.

XLVI. I opened the Body of a Monk, who was said to have died of Colick pains, and enquiring into the cause of the Disease, I found the bottom of the Stomach not only inflamed; but corroded also to the middle of the coat. For the cure of such an Inflammation and Erosion of the Stomach Spigelius said, that nothing had been better, than the often taking of terra sigillata, as being a thing, which sticking firmly to the eroded coats of the Stomach (as firmly as ceratum diachalciteos, applied to the inflamed foot) would have dried up the erosion. I after tried the worth of his saying twice in extreme pains of the Stomach, to my admiration; when they could neither be laid by taking any Medicines inwardly, or applying any outwardly, except terra sigillata mixt with Syrup of Comfrey.

Sculterus.

XLVII. When once a Person had taken a Purge of an unskilful Physician, who, to hasten the working, had mixt some sharp corroding things with it, there

there arose so great a pain in his Stomach, that for three Weeks space he could take nothing in at his Mouth without cruel pain in his exulcerated Stomach, and was almost starved with hunger. When the Physicians laboured in vain, he at length used Tragacanth, a thing which his own reason and experience suggested to him, mixt with Rosemary flower water, by the tenacity of which Tragacanth the Ulcer healed, and afterward he lived in health for several years.

Bartholinus.

XLVIII. Galen shows, that a Cupping glass applied to the Stomach, eases pain quickly and to admiration. Yet have a care, that there be no crude Humour in the Stomach, for if there should, it would encrease the pain.

Marcus.

XLIX. In puffing up of the Stomach, drying and astringent Plasters, adding the 4 hot Seeds and Sulphur, must be applied: For these astringent Plasters hinder the great dilatation of the Stomach, and so the Wind is better discharged upwards or downwards. They are made of *Emplast. pro matrice, de mastice* and *contra rupturam*. We add seeds of Cummin, *Seseli*, Parsly, Caroway, and other strong smelling things, as Galangale, *Cyperus*, and astringents, unless pain hinder. For then upon the account of the Pain we must use other discutients, that are a little relaxing. But if it be without pain, the constriction must be encreased, for the parts that are once distended, or made lax by distension, never come to themselves again, unless they be kept swathed, or some other way straitened. For this reason, in such Diseases, after some evacuation and discussion we order to bind the region of the Stomach by degrees and gently, which may be done conveniently, with a swathe over the Plaster.

Ronleletius.

L. In the cure of a weak Stomach we must observe, whether being swollen with wind, it can bear Fomentations, and such Remedies. For, if there be any inflammation in its coats, being irritated by the application of hot Medicines, it puffs up, distends, and is most grievously pained. Which they also do by disturbing corrupt Humors, and upon this account, they rather increase the heat than cure.

Mat. Martini.

LI All the back part of the Stomach lies upon the Spine, with which at the first *Vertebra* of the Loyns it is knit together. Whence it happens, that whenever the Stomach is violently distended with wind, those parts, that are joyned to that part of the Stomach which is distended, do partake of the pain. Wherefore when the hind part is distended with wind, then the pain, lying most upon the Spine and Loins, invades the region of the Kidneys, very sharply, just as if one were troubled with the stone in the Kidneys. Which thing often imposes upon the most skilful in the Art, so that they often think, they have the stone who are only ill of wind.

Ficinus.

LII. In an Inflammation of the Stomach Bleeding must often be repeated, in both Arms, as much as the strength will bear. Thus, though because of swooning and coldness in the extreme parts, strength may seem low at first, yet that weakness is from oppression, which requires evacuation, and therefore cannot hinder bleeding.

Riverius.

LIII. Purgatives are not approved of in this disease, because they disturb the Humours, and draw them to the part affected: Yet *Avicenna* commends a decoction of Tamarinds; or half an ounce of *castia* dissolved in Endive water or Whey, every day, for a week; because this purges by loosning, not drawing, takes off the acrimony, and allwages pain. But it is better in the beginning to abstain wholly from purging. When the 7th day is over, and some signs of concoction and declination appear, a Purge may be given of Infusion of Rheubarb.

Idem.

LIV. Among Lenitives *castia* may be convenient for an inflamed Stomach; for though *Galen* 13. meth. 11. disapprove of purgatives in such cases, yet he would not have rejected *castia*, if he had known it. Fortis.

LV. The Advice of the Arabians must not be followed, who apply to the Stomach not only Lettuce and Endive, but Poppy juice actually cold, Errors, as I think not to be admitted: for this so principal a part, and the store house of the whole body, should not be so much cooled. ¶ We have an excellent Remedy in *Galen* 12. meth. 7. Drinking of cold water, yea, according to *Trallianus* a bladder half full of cold water or snow applied to the Stomach. Which two Remedies notwithstanding must be used with a great deal of caution. For one who was 40 years old, being made very thirsty and lean by a hot and dry intemperature of his Stomach, upon drinking a great deal of cold water, left off being thirsty immediately, grew better and digested well, but his Gullet being over cooled, killed him, *Gal.* 7. meth. 8. Therefore we must be careful how we use such Medicines: for *Benivenius* has observed, that a certain very cooling Plaster being applied to the Stomach, did cause difficulty of Breathing, Hickup, and death at last. ¶ Coolers must be such rather potentially than actually, for things actually cold (when the Stomach is inflamed) shut the pores, thicken the Humours, and settle the Blood in the inflamed part. Saxonia.

LVI. We must also have a care of Opiates; for after much use of them the Stomach is ever after all their life long weak, and the mouth of the Stomach is very sensible, and quickly hurt. They condense also by too much cooling. Wherefore a *Scirrhus* follows an Inflammation. Fortis.

LVII. It is worth noting, what *Dodoneus Obs. Med. cap. 31.* tells us of red Urine, That such Urine is made not only in hot Diseases, but oftentimes when the Stomach, and the Liver are weakened and cooled by long Diseases. And he relates a History of a Man Fifty years old, who after a Quartan Ague fell into a Lientery for five Months, and voided crude matter, and no Fever remaining, his Urine was very red: But he had no regard to that, but only to the crudity, and to make provision for the Stomach and Liver, which were weakened with the Quartan Ague, he put him into a heating and drying course of Diet, and gave most generous Wine. For Medicines he gave *Diagalanga*, *Diatriempipercon*, &c. whereby he prevailed so far, that the excrements appeared concocted, and the colour of the Urine abated, and was like a sound Man's. But when the Patient thought himself well, and privately drunk some Beer, his Urine presently grew red again, which plainly showed, that Urine sometimes may be tinged by the crudity and coolness of the Stomach: And when he abstained from Beer, his Urine became again like a healthy Man's. We may often observe this in practice, especially in such as recover of Quartan Agues; for they, when they have eaten any thing hard of digestion, often make such Urine; which colour is not bloody but such as is in burning Fevers, and it comes not from bile, which does not abound, but rather from a crude, and gross Humour. For, if the Stomach be weak, the sulphureous and grosser parts of the food, are not separated in it and the guts, and so voided by stool, but pass into the blood, and being separated from it in the Kidneys, tinge the blood with a red colour, for Urine has not its tincture from bile only, but from a red salt, as we see Ly is tinged with an impure Salt. So in *Scorbuticks* the Urine is not only red, but shining, afterwards letting fall a red sediment, like to brick dust. Idem.

LVIII. The famous *Michael Rucerus* formerly took notice, that heat of the Stomach, called by the Greek *ἐφύρηγία* which comes from a cold Humour and has been often cured by him with Treacle and

Sennertui.

and generous Wine, must be carefully distinguished from the burning of the mouth of the Stomach: For he says, that this, which Galen 3. de compos. Med. S. loc. cap. 3. mentions by the name of *ἔγκυσσις*, arises from violent hot Cholera, fixt in the coats of the Stomach, and is very rare in Germany which he only saw once all his life time in a certain Nobleman, and that he cured him by drinking cold water and Milk. Paracelsus deriving the heat in the pit of the Heart or mouth of the Stomach, from the effusion of Gall and Tartar, omitting Purging, affirms the pain is only to be allwaged, which he endeavours to do, with Henbane, Poppy, Mandrake, and Darnel, with Treacle: He also gave *Laudanum Opiatum* with Amber, Mace, Sugar Candy and Mint water.

Velschius.

LIX. A Nobleman after high drinking of Rhenish Wine, was taken with a violent burning heat at his Stomach for several dayes, so that, though he was very hungry or thirsty, yet he could neither eat nor drink without pain, I perswaded him to take half a scruple of *Sal prunelle* dissolved in Elder water, he did it, and found ease, and in process of time his heat was quite extinct and went away. Another Nobleman complained as much of such a heat in his Stomach, from the same cause, I recommended to him the abovesaid *Sal prunelle*, which had given several others present ease; but with different success: for his pain encreased, to the hazard of his Life: Being affrighted with this Symptome, and considering that the heat arising from too much sharpness in the mouth of the Stomach, might be encreased by the Salt Nitre, when I found that Mucilage of Quince-seeds would do no good, I gave half a drachm of Cream of Tartar, and what was the effect? It had not been given a quarter of an hour, but the pain was quite gone, and so the Patient was saved to the admiration of several.

A. Cnossellius.
Mise. Cur.
ann. 1672.
Ols. 211.

LX. Joh. Raymund. Fortis consult. 89. cent. 2. propounds moistning with some attenuation. Among externals there is no better Remedy than Milk, especially Asses, instead of which, when it is apt to corrupt, I usually apply 5 ounces of Mallow juice depurated. But we must wholly desist from the use of other drying things, Rheubarb, Tartar, and even Chalybeates, which otherwise I am wont to use against hardnesses proceeding from other causes, as condensing cold, or filling abundance of the Humours.

LXI. The Wife of N. was suddenly taken with most violent pains about her Stomach and Spleen, which could neither be stopt by Fomentations, nor Purging: but after she was bled plentiful in the left Arm, her pains left her.

Riverius.

LXII. The Wife of N. the last 3 Months of her going with Child was every day troubled with a tedious palpitation of her Stomach, and she was happily cured of it with no other Remedy, than 1 scruple of *Requies Nicolai* swallowed now and then before meal. ¶ A certain Water-drinker having at a Feast drank several healths in Water, fell into horrible gnawings at his Stomach, and the Heart-burn, the next day he was all Lickerick, the day following he took a Purge. About Evening his pain came afresh, and the upper orifice of his Stomach began to beat as strongly as his heart (which Pulse or rather pulsation, of the Heart, I have often observed in the Colick, especially that of our Country). I gave him flowers of Nitre with Magistery of Crabs-Eyes, Pearl and Coral, and the Pain vanished in a moment and returned no more.

Simon
Schultzius,
Mise. curius.
ann. 1676.
Ols. 141.Car. Ray-
ger. mise.
cu. ann. 76.
Ols. 205.

LXIII. Choleric, lean, red haired, and thin bodied people are in the beginning of Summer troubled with a pain at their Stomach: for because the Orifice of their Stomach is endued with a most exquisite sense, it is vellicated by bilious Humours (which were before in some measure checked by the temper of the Spring or Winter). The cure is, to purge with Rheubarb, and to give 3 or 4 grains

of *Laudanum Paracelsi*; for certainly when the exquisite sense of the Stomach is dulled, they live much better.

P. Pachequus
Ols. 34.

LXIV. Revulsion must be made of the Humour that causes the pain in the Stomach by divers means, by frictions, Bathings, Cupping, &c. and it must be derived to the wayes of Urine, the Mouth, and to the Muscles, by cauteries: And sometimes to the very Joynts, though they have been pained before. Galen 7. Meth. c. 11. says, we must consider, whether the part mittent of the Humour to the Stomach be less noble than the part fuscipient. If the part mittent be less noble, the matter must be drawn to the ignoble part, if the pain of the Stomach proceed from arthritick pains, the Physician need not fear to send the pains to the former place. If they be equally noble, we must take care to strengthen both.

Saxonia

LXV. Since Emulsions sweeten the acrimony of the Humours, especially of the Serum, when it is tinged with a bilious saline acrimony, it is observable that they are not so good for acid Humours, or for such in general as are gathered in the first wayes, because acids, as they are contrary to Milk, so also to emulsions; and for this reason they are not so convenient in an acid and pituitous crudity, but they rather add weight to that viscosity, and cause disturbances, wherefore in this case they are often vomited up again.

Wedelius

LXVI. In the use of all Emulsions, also the strength of the Stomach must be looked to, that they be not ordered, when Humours abound, and consequently laxity; nor in wind: for when the Heat is not strong, when Humours in general abound especially acid, bilious, phlegmatick, in and about the Stomach, wind is easily produced, or the Emulsions are windy. Therefore in wind of the Stomach, weak appetite (by an essential fault especially, for in Fevers it is another thing) Colick, Dropsie, diarrhoea and other fluxes of the Belly, they are not altogether so commendable, for they easily turn fower, and corrupt on the Stomach. Wherefore the *Helmontians* little esteem them, because they bring a strange fowerness: hence likewise it is easily evident, that they do no good in any pains, coming from vitiated Chylification, from wind in the lower Belly, or from obstructions there. I observed once, that one sick of a Malignant Fever, when he took much of an Emulsion, that was prescribed him, he fell into the Hickup; others have been troubled with belching, after them.

Idem

LXVII. There arises a great difficulty about a cold Stomach and a hot Liver; how namely a cold Stomach may be heated, and the Liver not inflamed; Since what things heat the Stomach, the same for the most part, also inflame the Liver. And Galen contriving how to obviate this mischief, invented that composition, which he called *Diatrion Piperis*. This Medicine indeed is endued with a singular virtue, to heat the Stomach, so as that its heat shall not be communicated to the Liver: for, seeing it consists of 3 sorts of Pepper, whose heating faculty consists in a thin substance, it is spent before it comes at the Liver. It is therefore a convenient Medicine to heat and take off the intemperature of the Stomach.

Abr. Seyl-
ler, Conf. 64
l. 4. Conf.
Cratony.

Medicines especially made use of by eminent Physicians.

For Imposthumes, Erosion, and Ulcers.

1. I have experienced this Plaster, that it ripens Imposthumes, Take River or Sea Crabs; boyl them in water, let the flesh when boyled and bruised and mixt with Barly flower, be applied. This ripens the Imposthume effectually in 3 dayes.

Bayrus

2. When

2. When the Ulcer is cleansed, Amber may be given. It is good also in Vomiting of Blood.

3. Antimony is the only thing which Purges and rids the Stomach of all its tartareous excrements. When the Body is purged the butter of Pearl is good for a Consumption of the Stomach; but he that can use the sweet and red Oyl of Antimony, needs no other Medicines for the Cure of the Stomach.

4. This Medicine is effectual in healing an Ulcer in the Stomach. Take of Frankincense, Mastich, Tragacanth each 3 drachms, Amber 1 drachm, a little Dragon's Blood, with Syrup of Quinces.

For heat of the Stomach.

1. I have experienced, that Tincture of Tartar is good for heat in the Stomach.

2. It is especially good for such as travel in Summer time to take the tops of the twigs of a green Sloe tree, that have grown that year, and chew them, and swallow them.

For Wind.

1. There is nothing more convenient and proper for concoction, than to wear a Plaster of one part pure *Ladanum* and two parts Wax; for it sweetly maintains the innate heat, and conduces very much to break Wind and help concoction.

2. Dwarf-Elder used any way is exceeding good for Wind in the Stomach or in any part. The root of it is more effectual than the leaves. Boyled in Wine and drunk, it is very good for Dropsies.

3. Three or four drops of Oyl of Carowayes given in broth or wine are good, and Lozenges made of it. ¶ Also *Emplastrum de baccis lauri* is very effectual in expelling of Wind.

For Intemperature.

1. In a cold intemperature of the Stomach I have long experienced this Plaster to be of wonderful virtue; Take of *Diachylum maurus*, Pitch or Turpentine each 2 drachms, *Diarrhodon Abbat* 2 drachms, as much Wax as is sufficient. Make a Plaster and apply it to the Stomach. ¶ Oyl of Fir, Indian Balsame, and oyl of Mastich are also wonderful good in a dry cause.

2. *Crocus metallorum Abyssinicus* is excellent good in all Diseases of the Stomach.

3. In a hot and moist intemperature of the Stomach, I have often with success used this Electuary of Steel; Take of prepared Coriander half an ounce, *Species Diatrion Santalon* 2 drachms, Roses powdered 1 drachm, prepared Steel 6 drachms, Sugar dissolved in Rose water what is sufficient. Mix them. Make an Electuary.

4. This is an effectual Cataplasin in a cold intemperature of the Stomach, which *Rhazes ad Almanforem* makes of *Syrax*, Spike, Wormwood, *Calamus Aromaticus* and Mastich, sprinkled with old Wine and juice of Quinces. ¶ In an intemperature of the Stomach coming from thick bile, when it sticks fast to the Coats of the Stomach, there can scarce be a better Remedy than *Hiera*. ¶ In a cold and moist intemperature the following water is good, which is good for a weak Stomach, purges it of stinky Humours, cures a Cachexy, and hinders the breeding of Worms; Take of Gentian, lesser Centaury each 3 ounces, Galangal, Cinnamon, Mace, Cloves, each 1 ounce, flowers of Sage, St. John's-wort, Rosemary each half an handful, white Wine 4 pounds. Digest them 8 dayes, and then deſill them.

5. Flowers of Roman Wormwood and tops of Melilot, boyled in Wine and strained. The Colature drunk is highly commended in a cold intem-

perature of the Stomach. ¶ Syrup of *Carduus Benedictus* is reckoned a present Remedy in a cold and moist Stomach, if taken warm in the Morning.

Ventris Dolor, or the Belly-ach.

(See the Colick Book III.)

Vertigo, or Swimming in the Head.

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Medicines.

I. AN accidental Vertigo, or any that is new, is for the most part cured by Bleeding, and Purging sometimes. For the cure of one that is habitual and inveterate there are three Medical Intentions. 1. When all the matter for the Disease to feed upon is taken away, we must endeavour to preserve the Brain free from new afflux of Morbifick matter; for which purpose when a right course of Diet is ordered, sometimes bleeding, and a gentle purge given frequently at intervals will be convenient. Let a dry and airy place be chosen; let immoderate and unseasonable sleep and study be avoided; let him abstain from Mornings and Evenings draughts; instead of the former let him drink Tea or Coffee made with a few leaves of Sage mixt with them; let an Issue be made in the Leg or Arm, and sometimes let the Hemorrhoid Veins be opened; let the Party affected alwayes rise betimes, and every Morning wash his Temples and Fore-head with cold water, and rub it with a course cloth. 2. The second Intention will be to take away the procatactick causes, wherefore we must endeavour both that the cacochymick Dyscrasie of the Blood, and the weak and too lax constitution of the Brain may be amended. For the First, Medicines, that are powerful alteratives, as temperate Antiscorbuticks, chalybeates, and sometimes Spaw-waters or Whey, are proper. To which, because of the latter thing indicated, cephalick Medicines must alwayes be added, such namely as are made of Coral, Amber, Man's skull, Male Pæony root, Mistletoe, Peacock's dung, &c. 3. The third Intention, which is properly curatory, takes away the conjunct cause, which nevertheless, when the procatactick are removed, usually ceases of it self: For if the approach of all extraneous matter into the Brain be prevented, there will nothing remain but pure Spirits, which having got liberty and room enough within the callous body, they disperse themselves thence every way. However for this scope of cure, we must give now and then Medicines endued with a volatil Salt, whose very subtil and

and active particles recreate the Animal Spirits; such as especially are spirit of Harts horn, Soot, Sal Ammoniac, impregnated with Amber, Mans Skull, &c. Tinctures of Coral, Amber, Antimony, Elixir of Pæony and the like.

Moreover it may not be amiss to adumbrate the method of cure a little more particularly, in showing what must be done upon account of the cure in the Paroxysm; and what for preservation, out of it.

I. As for the first, although the coming of the Vertigo, how cruel soever it seems, have for the most part no danger in it, and goes often off of it self, because the Patients think they will dye, and do desire the aid of Medicine in such a case, after a Clyster has been given, let Blood, if the Pulse indicate it. Then apply a blister to the Neck, and smell to strong things as Castor, spirit or volatil Salt of Harts-horn, Urine or Sal Ammoniac. These Spirits also may be given twice or thrice a day with a convenient dose of Cephalick decoction, at the hour of sleep take a bolus of Mithridate with powder of Castor. The next day, if the Disease be not gone, let him take a gentle Purge: Or, if the Patient be enclined or ease to vomit, let him take a Vomit, than which there is scarce a better Remedy. 2. And now we must consider, what must be done out of the Fit, for the cure of an inveterate and almost continual Vertigo. Therefore when I have put the Patient in a course of Bleeding and Purging according to his constitution and strength, it is my custom to advise him to take a Vomit once a Month, if nothing contra-indicate: For which end, the weaker sort, after they have stuffed their Stomachs, with slippery meats, may take 2 or 3 ounces of Wine or Oxymel of Squills, and afterwards drink store of Cardus posset drink, till they vomit. Others may take a Vomit of Salt of Vitriol or Sulphur of Antimony, or infusion of Crocus Metallorum. As for Issues, Blisters, Bleeding the Hæmorrhoids, Plasters or Caps for the Head; also Plasters to the Feet or Wrists, for revulsion or derivation sake, let the Physician consider whether they be needful. And because all things agree not with all People, the Physician must try divers Medicines, and various Methods, sometimes one sometimes another. The Vertiginous may drink for their ordinary drink small Ale with leaves of Mistletoe of an Appletree boyled in it instead of Hops: And in a 4 Gallon Runlet let a bag with half a pound of Peacock's dung and 3 drachms of Cloves bruised be hung in it.

II. Letting of Blood seems not proper, because the Disease may arise from vaporous and spirituous exhalations, which cloud Pallas her tower, and these cannot be evacuated by Bleeding: For Bleeding is rather proper in abundance of Blood, either in respect of the whole, in a Plethora, or of some part, in derivation and revulsion. And, the proximate cause of the Vertigo considered, there is rather need of such things as break wind, and prevent the breeding of it. For the decision we must consider, that in the cure of a Vertigo we must sometimes have respect to the antecedent cause, which by a certain continuity upholds the conjunct: Wherefore among other Remedies bleeding is prescribed by Aëtius, whether in the beginning or progress of the Disease, if nothing hinder it, especially where a bloody and hot matter gives original to those fuming exhalations, that cause the Vertigo. Galen. 4. de cat. 4. per v. f. 10. approves the same. A further limitation also may be here observed, which Heurnius sets; If, saith he, accustomed excretion grow slow, and the Disease encrease, as in suppression of Sweat and Blood, Blood may be let in the Arm. But you must not do this, when the Disease comes from cold, but where there is a Plethora, the Disease bad and the Age strong, a Vein may be opened, says Aëtius. We had last year an instance of good success in a Vertigo cured by Bleeding, that had long afflicted a principal Citizen, who was of

a hot constitution, but a weak head, who having been ill of a grievous Vertigo for several dayes by reason of vaporous and fuming Blood, after he had taken a gentle Clyster, and had in vain tried several proper Cephalicks, was at last by once bleeding immediately eased of that Symptome, that continually afflicted him. Yea, Paulus commends bleeding the Arteries about the Ears, when hot exhalations are conveyed by the Arteries in great store to the Brain: Instead of which Remedy they have now found a better, which is, a Cautey, either

Horstius

actual or potential, about the coronal Suture. III. Although some disswade Bleeding in the time of the Fit, lest strength, which is then low, should be further weakened, yet if the Vertigo be long and violent, and the constitution of the Patient such, that he must of necessity be bled, lest an Apoplexy seize him; and if there be imminent danger of an Apoplexy, there is no reason why Bleeding may not be allowed of, if there be Ind-

Sennertus

cants, that require it. IV. Bleeding in the humerary Vein is proper in Plethorick Persons, not only if the source of the Disease lye in the Blood, but also if there be either too much or spirituous Blood in the Head, which occasions the Vertigo: For seeing the Blood both of the Arteries and the Veins is confounded in the Sinuses of the Brain, if a Vein be but opened, spirituous Blood will come out; in which if the mischief lye, the main end of cure consists in bleeding. And for this reason they advise Bleeding in the Jugulars. Yea, many teach, that if Spirituous Blood cause the Vertigo, it cannot be cured, except the Arteries behind the Ears be opened: and this sort of Remedy has proved well upon experience, when all others have been tried in vain: Yet we must not do this, till we have tried all other wayes, and are certain of the cause, and know by the continual beating of the Arteries, that it comes from spirituous Blood. A Vein also may be opened in the Forehead, if it come from this cause, and in the Foot, if Vapors ascend from thence. And if the Menses be suppressed, the Saphena, especially if the cause, that sends the Vapours upwards, lye about the Veins of the Womb. Upon which account, the Hæmorrhoids also may very well be provoked, if the cause of the Disease lye in the Mefaricks.

Platerus

V. If neither Bleeding in the greater Veins, nor in the wrist, nor in the Hæmorrhoids, nor Cupping will do you good, especially if you have tried them often, and if you have used Purges, stronger and weaker; you must then without doubt have recourse to sweating with Guaiacum, China, &c. especially if there be any suspicion of the Pox. But if these neither will do any good, then necessity puts us on two sorts of Remedies, the first whereof intercepts the passages, by which any thing is transmitted either from the whole Body or from any part of it, to the Brain. And this comprehends the cutting of the Arteries behind the Ears, celebrated among the Antients, which they valued so much. Which Remedy, besides that it is suspected for Barrenness (if we may believe Hippocrates) and to cut an Artery any where is not without danger; Besides also, if they may safely either be cut or burnt, we cannot therefore think, that all the wayes, whereby the Head receives, are stopt presently, since often the mischief gets into the Head by the internal Vessels, which can neither be burnt nor cut. Wherefore it were a madness to try a doubtful and suspected Remedy, which is more dangerous than the pre-existent Ail. But where the Illness is extreme, I should rather venture to burn the Veins of the Forehead and Temples by a Skilful hand. If you dare not venture on this, you may betake your self to the second sort of Remedies, which is, if the Veins be very turgid in the Head, to empty the fulness of the Head, by Bleed-

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in

Mareseus.

ding under the Tongue. ¶ But if any one intend to abate the fullness of the Head, omitting doubtful Remedies, it is better to open the Jugulars, which is a present Remedy, and without danger.

Sylvaticus.

VI. Arteriotomy is propounded by Galen and other Græcians, Arabians, and Latins, made either behind the Ears, as Galen advises, or in the temporal Artery, that is most tumid and beats most. Now, an Artery is cut either in the same manner, as a Vein, only for evacuation of the hot Blood, as Parezus advises, whose counsel I have followed in this operation in other cases, with success: Or it is cut deep, and quite through transverse, so that the ends of the Arteries may contract themselves and close up, whereupon no great effusion of Blood follows. This operation more certainly intercepts evaporation, by coalescence, not by obstruction of the Arteries. Although it be a question, whether this transverse section stops the flux of the matter, since a hot evaporation is made by the Arteries, internal and external, right and left. Wherefore perhaps the interception would be greater, if strong Astringents were frequently applied to the carotid and temporal Arteries. But the transverse section is now usual at Milan.

VII. There are not wanting some, who advise to burn the Head in several places with an hot Iron, which indeed is less suspicious, especially where the case is desperate. Instead of which, our Art has found a Remedy of no less moment, and much safer, namely an Issue behind in the Head, or a Section there. Which Remedy though it be very effectual in this evil, yet it should only be used, by them, whom the Vertigo casts down, and makes fall in the Fit. For seeing it is certain that the Ail is communicated to the hinder Ventricles of the Brain; it may be feared, that the Patient might fall into an Apoplexy, Epilepsy, or at least a Palsie. But when all the Illness consists only in a Vertiginous circumvolution, or dimness of sight, a sign indeed of hurt in the fore parts of the Brain, I think it far better to make an Issue in the Arm, or a Section thereabout. But if it so happen, that the Liver, Womb, or Hæmorrhoids are stoppt, or any other evacuation by Ulcer or Fistula (which often happens) be suppressed; also when any swelling in the Lower Parts falls; without doubt I think it necessary, either to recall the former fluxion; or instead of it, to open an Issue in the Leg, by which Nature may transmit what she used to expel other ways.

Mercatus.

VIII. Beside other Remedies, I have observed, Issues made in the Legs have done much good. And though they be properly convenient where the Vertigo comes from the Spleen, Liver or Womb; yet I have likewise observed, that Issues in one or both Legs have done a great deal of good, when it comes from the Stomach.

Mercurialis.

IX. That Vertiginous Persons should be purged, especially upwards, is proved from 4. aph. 17. and lib. de affect. n. 2. But if pain and the Vertigo, sometimes the one, sometimes the other, come upon the Head, indeed these things used do good, that is, the Remedies prescribed, among which Purging of the Head is reckoned. He confirms this lib. de veratri usu: This opinion may be proved from 18. sect. 4. aphor. and from Reason; because if the Vertigo arise from bile floating upon the Stomach, without doubt it must be excluded. But Hippocrates 1. Prorhet. num. 9. excludes the Vertiginous from Purging. They that Vomit black matter, loath their meat, are delirious, pained about their pubes, who have a fierce or closed Eye, purging Physick must not be given to them; for it is pernicious; nor to such as are swollen or vertiginous. Dimecles 5. Epid. 80. having the Vertigo, was not purged nevertheless. If the Vertigo arise from a weakness in the Head, it will be made worse by purging: If from a mass of Humours in the Brain, they will be more disturbed, whence the Vertigo will increase. Besides, in an acute Fever a Vertigo often

comes from the concurrence of Blood, critical or symptomatical, but this is cured by Hæmorrhagy, not by purging. This may be reconciled, considering that Hippocrates 4. aph. 17. speaks of a Vertigo, a stranger, coming from bile floating on the Stomach, which cannot be discharged but by Vomiting, as the Stomach is next to it, and it has a tendency that way. And that he speaks of a Vertigo coming from that cause, the Diseases joyned there do shew. And an inbred Vertigo proceeding from a Malignant Cacochymy in the Brain, without doubt requires purging, not by emetics, because vomiting fills the Head, but downwards: for the foul Humours being carried off, whereby the animal Spirits are disturbed, the Vertigo also will cease; because, when the matter is discharged, no more caliginous Spirit will be bred. But a Vertigo that has neither a Plethory nor a Cacochymy for its cause, but a fixt and bad disposition in the Brain, will not give way to purging, but only to Alteration: The place quoted out of Prorhet. must be understood of this; though Galen in his commentaries thinks it is only prohibited by weakness. What if we say, that Hippocrates in that place judges, the Vertiginous should not be purged, because of a concurrence of Symptoms attending? For he says, Neither the Vertiginous, nor swollen, nor that cannot walk, nor loathing their food, nor discoloured. For it is clear, that such are very ill, and cannot bear Purging. Lastly a Vertigo, that is the effect of a weakened Brain, and of exhausted Spirits, such as befalls new married People, requires only Restoratives, not further evacuation.

Sinibaldi, Antiph. pag. 174.

X. Strong Purges must wholly be avoided, for they heat too much, and cause vertiginous motions in such as are not subject to them.

Crucius, de Quasitis.

XI. Vomits often do good: for besides Authors testimonies, it appears from common experience. And moreover because the vertiginous do often vomit, hereupon many have grounded an opinion, that the cause of this Disease does almost ever lye in the Stomach. Now, the reason why Emetics do good in this Disease, is, because by this sort of Physick, there is both a great revulsion made of the Humours in the Brain, and the disturbed Spirits are soon composed. When the Membranes and Fibres of the Stomach and Parts thereabout are velleated, divers Humours, that is, the Nervous, Serous, Lymphatick, Pancreatick, and Bilious are drawn to those Parts, and so carried off, so that the Brain is free from the afflux of them, and easily discharges many that were settled there already.

willis.

XII. After universal evacuations we may proceed to particular ones of the Head by Sternutories, Errhina, Masticatories and Apophlegmatisms. Errhina indeed are suspected by some, for they fear, lest by that motion the Humours and Spirits in the Brain be more disturbed, and so a Vertigo be caused, but if convenient evacuations of the Head have preceded, we need fear no such thing.

Sennertus.

XIII. In a Vertigo if fumes be observed to ascend by the outer Vessels, Repellents have place; but if they ascend by the inner, they are so far from doing good, that they do hurt, seeing they do not repress fumes, but retain them there when ascended. The case is the same in the Head-ach.

Frid. Hoffmannus.

XIV. If the Vertigo arise from turning the Body round to the right or to the left, the turning the contrary way cures it soonest: In which lying on ones back is good. But if it come from an internal cause or from Drunkenness, this causes it.

Platerus.

Medicines especially made use of by eminent Physicians.

Donatus ab Altomari. 1. This is a most effectual Remedy in a Vertigo by Sympathy, if Southernwood powdered be drunk in Wine warm, or with Oxy-mel that is not sharp, as Marcellus sayes.

Rod. à Fonteca. 2. Oyl of Box, as in the epilepsy, so in the Vertigo is reckoned an excellent Medicine inwardly and outwardly, anoynting the Arteries of the Temples, behind the Ears, and at the Wrists, and the Soles of the Feet: Inwardly thus; Take of Conserve of Rosemary flowers 4 ounces, Oyl of Box, Nutmeg, Mint each half a drachm, with Syrup of Citron rind make an Electuary. The Dose half a drachm; yea, if 8 or 9 drops of Oyl of Box be given with three ounces of Pæony water, he will find no better Remedy.

F. Hofmannus. 3. Three drachms of Seed of Columbine is good in a Vertigo.

4. Van Helmont sayes he cured himself of a Vertigo with Sulphur of Vitriol.

Mercatus. 5. Silk worms dried and powdered, and strewed on the Head, wonderfully strengthen the Head in a Vertigo.

Mercurialis. 6. Marcellus has a Medicine, which I have experienced; Take Myſi and beat it to powder, steep it in Vinegar, and so steeped apply it in manner of a Cataplasim to the Temples and behind the Ears: for it has an excellent virtue to disperse Vapors, which cause a Vertigo.

Eustachius Rhodius. 7. Some say, that the juice of black Betes, applied to the Temples, quickly cures a Vertigo.

8. In a Vertigo by Sympathy coming from an hot cause this is a most excellent Remedy; Take of Fumitory 1 handful, Dodder of Time 8 drachms, Myrobalans citrine 2 drachms, pulp of Tamarinds 1 drachm, Endive, Cichory, Purslain each 1 handful, Raisins 6 drachms, let them boyl in a sufficient quantity of water; to the expression add of juice of Quinces, juice of unripe Grapes each 3 ounces, pulp of Damascens boyled in the former decoction, and passed through a sieve, 1 pound. Let them boyl to a moderate consistency; then add of Cassia new drawn 6 ounces, pulp of Tamarinds 3 ounces, Species ditragacanth. Santal. each half a drachm, Sugar what is sufficient. Mix them and make an Electuary. The Dose from half an ounce to 6 drachms, every or every other day before Supper. ¶ In a Vertigo caused by obstructions of the Brain this is an effectual Remedy; Take of powder of Staves-acre, 8 grains, Myſi 1 drachm Pellitory, of Spain 1 scruple, yellow Wax 1 ounce, a little Sugar. Make it into a Masticatory.

Vesicæ Affectus, or Diseases of the Bladder.

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IV.

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Medicines.

I. Galen is reprehended by some, because 7. method. cap. ult. he says, that the Bladder is purged by the Guts, if it be full of Humours; For, say they, what other way is there from the Bladder to the Guts, than by the Ureters, Kidneys, and a thousand Mæanders in the Veins? But it were ridiculous, to imagine purging by so many turnings, and to leave the freight and common way. Yet let not Galen be blamed, who several times opens the causes of this transfusion, and commends Hippocrates his judgment, That all things have a common conflux and transpiration. Do you think that the distribution of the Aliment is made only by wayes conspicuous. But there are many parts which have no conspicuous wayes to them. If any part be starved, it snatches what it can get, the Veins from the Arteries, and these from the Veins, by sweating through the pores of the Veins, therefore the Guts may take from the Bladder, and it from them. When any part has a Humour fell into it, out of pain or weakness, does it not receive excrements from every hand? In a Looseness of the Guts is it safe for the Bladder to abound with excrements, which cannot commodiously be purged by their own way? I think not, for when this way is stoppt, they might come violently upon the Guts. But if upon these occasions something may be transfused out of the Bladder into the Guts, why may not something far more easily be drawn by the strength of the Medicine, through the pores of the coats? Galen. 1. de fac. nat. sayes, that if an earthen Vessel full of water be set in a heap of Wheat, the Vessel will be drawn dry, and so bulk and weight will be added to the Wheat, and this is done by the Wheat's drawing the moisture through the thick Vessel. And how much a more powerful attractive vertue, in all probability, is there in Physick, than in Wheat? And how much more convenient is the Coat of the Bladder for transfusion, than an earthen Vessel? Which if it have nothing else, it has wayes of drawing nutriment, which very same ways may serve to draw a Medicine. Wherefore by what ways the Bladder receives nourishment, by the same it may remit the excrements wherewith it abounds. But the Bladder does not receive nourishment by the Ureters, which only carry Serum, but by Veins and Arteries. And if it be difficult to you, how the juice, that is extravasated in any cavity, should be resumed into the Vessels; I suppose it has not been your fortune as it was Galen's, to cure the jaundice with once purging, or to evacuate the water between the Peritonæum and the Guts, by stool.

II. From one that was ill of an Inflammation in his Bladder I immediately took 3 ounces of very foul Blood from his right foot. I bled him in the foot, both because he had been let Blood in the Arm formerly for an Ague; and also because Galen in several places orders Bleeding, for parts ill above the Kidneys in the Arms; for the parts below the Kidneys in the foot. You will ask, whether must we always let Blood in the foot for parts below? I answer, that when the body is very plethorick and strong, and in the beginning of an Inflammation, it is no absurdity to bleed in the Arm, and then presently the same day in the foot: for although Bleeding in the Arm be a great revulsive, yet because it does it but slowly, for it is far from the place affected, therefore I advise to let Blood first in the Arm and then the same day in the foot. ¶ Riverius first orders the Basilic Vein to be opened twice, thrice, four times, or oftner, if there be strength sufficient, till the fluxion cease, which is known by the abating of the pain: this revulsion being made, he will have the lower Veins opened also for derivation. ¶ Walæus meth. med. 98. agrees with Ferdinandus. In what place, saith he, must we bleed for revulsion sake, whether near, or at a distance? My opinion is, when the part affected is above the

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Heart,

Heart, it is convenient to bleed an upper Vein; but if the place be below the Heart, open a Vein below.

III. In an Inflammation of the Bladder *Alimarus* and *Mercatus*, after Bleeding and Fomentations, if they be not sufficient, order a Cupping-glass with Scarification to be applied to the region of the *Pubes*. *Salvus* contradicts this, fearing lest the Inflammation should be thereby exasperated. But he need not fear it, other things as well universals as topicks being premised: For the matter being softened and prepared, is by this means diminished by derivation.

IV. In Ulcers of the Bladder injections must not only be made by a Syringe, as is done commonly; but a Catheter must be put into the Bladder, and the Syringe, must be fitted, so the Injection is carried to the part affected.

V. Injections, to dry up Ulcers must be made of driers with little attrition: For things too astrigent, stop the Urine, which causes much pain: Seeing a sharp Urine, when it comes through a narrow passage, causes more pain, than if it came through a larger.

VI. An injection of a decoction of Comfrey roots is proper in this Disease, because it heals, and has a certain Mucilage, which is necessary to make the Medicine stick, and mollifie the asperity of the part; Horse-tail, Plantain, Ceterach may be added, for it dries much; St. Johns wort, especially in the Stone with an Ulcer in the Bladder because it breaks the Stone, and heals the Ulcer. Litharge powdered and boyled a good while, and strained through a filtre is good. Things also may be added, which are reckoned to heal the Nerves, because it is a part more Nervous than Carnous: Root of *Narcissus* is good, because of its Mucilage. Trochicks must be finely ground, as for Collyries.

VII. A Woman, who was troubled with a foul and sharp Ulcer in her Bladder, when *Cyprus Turpentine*, *lignum nephriticum*, Steel, and other drying and cleansing things would do no good, betook her self to the Spaw waters, by continual taking of which, she overcame the deplorable Ulcer.

VIII. I much question, whether there be any hope of curing an Ulcer in the Kidneys: I do not remember that either I or any body else ever cured one. Yet something may be used to give ease and keep it from growing worse: for which purpose I find nothing better than Balsame of Sulphur, as well *anisatus*, as *succinatus*, *juniperinus*, and *terebinthinus*; by which, although their strength be much wasted, before they come to the Kidneys, yet the Breeding of much pus is hindered, and the encrease of the Ulcer is stopt. The same may be said in the Ulcer of the Bladder, in which case *Balsamus Sulphuris anisatus* does Wonders: And there is more hope here, because it may immediately be injected into the Bladder.

Medicines especially made use of by eminent Physicians.

1. When the Inflammation is laid, if it be exulcerated or there be Pustules, it may be cleansed with half a pound of Hydromel, with 2 ounces of juice of Smallage: with 1 drachm of Myrrhe powdered: for this is an excellent cleansing Medicine.

2. A decoction of Strawberry leaves drunk, will ease the most violent pain of an Ulcer in the Bladder.

3. *Terra sigillata* or Bole Armenick taken in Milk of Almonds or their Oyl, or in Asles or Goats milk, is a peculiar Remedy: for it purges the Poyson, and dries the part, and the Ulcer without

pain, and stops blood, if the Ulcer come from *Can. Nic. Pifo. tharides*.

4. Liqueurish taken any way is wonderful good in Ulcers or Excoriations of the Bladder; for it cleanses, dries moderately, heals, and tempers the Solenander. Acrimony of the Humours.

5. Take of the Seeds of *Alkekengi* 3 drachms, seeds of Citron, Cucumber, Gourd each 3 drachms and an half, bole Armenick, Frankincense, Dragons Blood, white Poppy seeds, bitter Almonds, juice of Liqueurish, bark of the Frankincense Tree each equal parts finely powdered: let them be mixt a long time with the white of an Egg in a leaden Mortar with a leaden Pestil, let it be injected with a Syringe.

6. Two scruples or 1 drachm of Trochicks of *Alkekengi* in Eadive water heal Ulcers in the Kidneys and Bladder admirably. Chr. a Vega.

7. For a scab in the Bladder; The drinking and injection into the Bladder, of Whey, especially if Mastic tree, Scabious, Pomegranate Peel, or Plantain, have been infused or boyled therein. Mercurialis.

Ulcera, or Ulcers.

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Cooling Broths are improper. LII.

Medicines.

I. Since for the most part Bathes consist of Sulphur, Alum, Vitriol, Iron, Copper and other Metals, which cleanse and dry extremely, and therefore are used with success in Ulcers, Itch, &c. at last they are abused, so that they are usually the extremest refuge in desperate cases: But it often happens, that when diseased Persons are sent hither without any regard had to the Patient or his Disease, their end is hastened. I have seen it several times, especially in a Matron of seventy, who had been several years ill of a painful and contumacious Ulcer, with a perishing of the Bone, about the juncture of her left Foot; wherefore she went to *Neubausen* Bathes near *Berne*, and found benefit; for her pain abated, and the Ulcer healed up. Yet not long after she grew ill again, and her Ulcer broke a new: The next year she used them again; but then she was taken with a dangerous Fever, wherefore I advised her for the future to abstain from the Bathes, but to no purpose; for she went again to the Bathes at *Blumenstein*, which she had no sooner entered, but she was so weak, that she scarce could recover it. Do you ask the Reason? The putrid matter, that is in the muscular parts about the Ulcer or in the Bone, grows hot with the heat of the Bath, becomes sharp, acquires a Malignity, and makes the Ulcer more painful. Wherefore Humours flow continually from the whole to the part affected, and with the rest of the foresaid Humours, inclosed in the part, do corrupt. Besides, the matter grows hot in the Vessels, which the heat of the Bath, turns into Vapors, which go to the Liver, Heart, and Brain, whence proceeds an Infection of all the Spirits, and other grievous Symptoms.

II. Beware, that you do not take all that *Crollius* has told of his *Lapis Medicamentosus* for oracle, For sometimes a Theorist writes many things with a feather of *Icarus*, and extols them to the Sky, which when they touch the Sun of experience, melt and turn to nothing. If you examine the ingredients of this Stone, you will find it hot and dry, with great acrimony: Nor can I see, how it should possess those innumerable virtues, *Crollius* ascribes to it, and how it can be applied in so many Diseases without damage. He writes, that it cures all Ulcers in the exterior parts quickly: But have a care, you do not try it in Ulcers of the Nervous parts, that are full of pain and Inflammation, especially in delicate, bilious and cacochymick Bodies: for it immediately causes pain, inflammation, watching, inquiet, and other Symptoms. I saw this formerly in a young Man, who I remember upon the application of it, after a violent pain fell into a Swoon. Have a care also, that you do not apply it in cancers or cancerous Ulcers of any part; for you will immediately find the ail grow worse.

III. Aluminous water also is suspected in cancerous Ulcers. *M. N.* was ill of an Ulcer at the root of

his Tongue, of a cancerous nature: It was exasperated by the application of the said water prescribed by a Physician. Wherefore I persuaded him to wash his Mouth with water of Frogs, Craw-fish and Plantain with Honey of Roses, and to strow powder of Frogs and Craw-fish burnt upon the Ulcer: after this the Malignity of the Ulcer abated quickly, to the admiration of them all. *Idem.*

IV. Ulcers, seeing they have cacochymie, and faults in the Humours for their causes, do also require purging; therefore *Hippocrates* seeing, and well considering the necessity of it in this case, mentions it *lib. de Ulcer.* which he uses not to do in other such cases. We have two sorts of purges in Ulcers, and other external Ails, the one Catholick, drawing from the whole Body, which we seldom use; the other contrary to this, which draws neither from the whole Body, nor all Humours. Each of them must be used with great care always. The former indeed is more simple, because of more frequent use: the latter more compound, because it is given for compound diseases. This is commonly threefold, Purging of Phlegm, Choler, or Melancholy. But we propound another, both absolutely necessary and especially for our purpose, which is properly the purging of the Blood by its repeated use. This is not only omitted, but seems not so much as to be known by its name. The Blood has 4 *Hypotheses*, of different natures that is, bile, phlegm, and melancholy; and Blood, in all mens judgment, is the legitimate Humour, the fourth substance of the mass, the purest part of the nutrient Humours: Now every one of these distinctly taken has its peculiar *Ichores*, that is, moist superfluities depending on them. When *Ichores* and Humours may corrupt and putrefy contrary to Nature's law, both jointly and severally; of which there is a numerous conjugation. Therefore either all the Blood and Ichors and Humours are in fault (as in the small Pox and Leprosy) and with some of these, as in lesser Cacochymies: Or all the Blood is polluted, absolutely, as much as it can be, as in the small-Pox and Measles. Although we ought to restore and correct all these Modes, of putrid Blood with Physick: yet this Mode of Corruption especially comes under our consideration which is not in a total and perfect corruption. Blood therefore recedes from its nature two ways, either the most part of it or but a little. But the farther the recedes is, the greater industry and stronger Medicines are required: And the measure of the Putrefaction can be no way better known than by observation of the Blood, as it is drawn out of the Veins: Or, if we cannot do that, from the discolouring, especially of the Eyes, Lips, Gums, Teeth, Hair, Nails, also from their strength especially compared with their feeding or fasting, from the quality of the excrements, and other affections appearing in the body. When you have searched out these things, then you must proceed to make up proper Medicines, which may purge the Blood several ways, by absterging, opening obstructions, ventilating, provoking Sweat and Urine, by giving a stool, by attenuating and qualifying their second or third qualities. But among all things they are chief, which act by peculiar property. Among purgers, the chief is Hellebore, either black or white, which *Hippocrates* therefore used so much, because he knew it had a singular faculty, to purge the Blood: Nor need we be so abhorrent from this Medicine, nor be so fearfull, because the Diseases wherein they are used are more frightfull, and proceed from black Choler: wherefore *Galen lib. de atra bile* writes, That in Diseases proceeding from a melancholick Humour, you must at the very first stop the growth of it by Melanagogues. As for the safe preparation of it, see *Salvus l. de Aff. part. cap. 19.* and others. Also *Sen-na*, *Coloquintida* and *Turpeth* are strong; weaker than

Hildanus, Cent. 5. Obs. 90.

Idem. Obs. 91.

than these are dodder of Time, root of Fern, Fumitory, Hops, Agrimony, Cichory, Ground pine, Speedwell, Strawberry leaves, Maiden-hair, Asparagus, Parsley, which according to *Montuus*, Purges the Blood by Urine. Among Compounds Treacle is the chief, which by reason of the Viper, it has in it, has the divine faculty of Purging the blood and humors, Trochises and Salts of Vipers; and infinite things out of *Hermes* his Laboratory. To which you may reckon preparations of Antimony, whose virtue, as it is admirable in separating all Metals, so its faculty is observed to be the same in Purging all corrupt humors, as *Quercetan* has observed. Among other cathartick forms of it, *Platerus* in several places of his *Praxis* commends the calcination of it: He tells of a certain Empirick, who for breakings out of salt Humors, filthy Itches, and tedious and pertinacious Diseases; mixt calcined *Stibium* in a Decoction of *Sassa parilla*, and did admirable things.

Severinus.

V. The edges of Ulcers, difficult to cure, must be taken greater care of, than the middle; for the fault always comes from the upper and higher Parts, and there also it begins first to heal: Which edges, if they be exasperated, and cut out (according to *Hippocrates* his rule *l. de loc.* We must first make old Diseases new) it is consentaneous to reason, that the fore abate forthwith, when the virulent and bad blood, which fed and made the fore worse, is gone. And it has in very deed been found, that it abates just as Plants, when the moisture is withdrawn, do wither. And so they that have Ulcers, and are daily under my Cure, do confess to me, that they find, they are eased of their old pain, and are bravely relieved.

Idem.

VI. Simple Dysepulotick Ulcers (that is, such as are difficult to heal up) if when you have tried all Medicines, (if the Ulcers come not from a Rheum) you can do no good, they must be conquered by fire. This is my invention, by Spirit of Wine, which in tenuity of substance, and aptness to take fire is most proper; a Linen, Tow, or Cotton, dipt in this, and set on fire as far as the Ulcer goes, will quickly turn and draw out the mischief by its gentle motion; if once be not enough, you may do it three or four times, or as often as you please. If you have any delicate Person under Cure, you may put a linen cloth underneath, spread with killed Mercury, the Mercury side to the Ulcer, so as to touch it, and having applied this, lay on another and give fire to it: It is certain, that those who have great sores, will bear this often, and with patience. Sometimes I have filled pipes of brass or reed with hot Embers, and rowled them athwart the ulcerous Parts; and so I have burnt and cured those sores, which would not give way to any of the strongest Medicines. In the same manner also you may treat all intemperate Ulcers and such as run a thin *Ichor* and sharp *Sanies*. But there is no need of fire for such as are dry and squalid. One who had been laid up ten Years of such an Ulcer, was burnt by me first with an Iron unknown, and sometimes with hot water, and was cured in 40 Days. *M.N.* had a carcinomatous Ulcer athwart his Tongue obliquely, which much afflicted him on the upper part of it; I applied a Silver spoon heated in the Fire to it, upon which he was free of his pain, and could speak freely, as though he had been cut for the Tongue-ty, which before he could not do. Wherefore having found out this Remedy, I invented a particular Instrument to heat the Tongue conveniently. And all the help, that accreus to Ulcers, which would otherwise eat through or off the Parts, is because nothing comes nearer, to the innate heat, which governs the Economy of the Body, than this external heat. *Aph. 5. 22.* *Hippocrates* also testifies there, that it is good for Diseases coming of hot Causes, that is, for eating *herpetes*, which proceed from a bilious and hot Humor.

Idem.

VII. Sometimes a Spontaneous Ulcer arises in the empty spaces between the Muscles, and in the cavities of the other Parts, which has cured some other more grievous Disease in the Body. Therefore an outlet must be left there for some time. I indeed advise you to it, because I have often found it a thing conducive; and reason persuades the same.

Idem.

VIII. A man of sixty, a great drinker, whose Face was all Sauce-phlegmed, had a Pustule arose in the upper part of his Chin, covered with a thick Scab, at first about the bigness of a large Pea, increasing more and more every day, and spreading to the middle of his Chin, very painful, ouzing out in several places at little Pores, a very sharp bilious Ichor. Because of the great store of cacochymy in this intemperate Man, and the sponginess of the part affected, some feared, lest in tract of time it should turn to a cancerous Ulcer. The suspicion encreased, because, when it was anointed with a Balsame, that had done much good in others it grew worse in a moment. The cause whereof I thought might be, for that all the Ingredients of the Balsame applied, were sulphureous, and so further exasperated the enraged, bilious, sharp Ichor. Wherefore I thought of checking it with Acids, and not without success: For *Sal prunella* being dissolved in the white of an Egg, and linen clothes dipt therein, and applied often in the day, the Pustule in five days time vanished, leaving no Scar behind it.

Thiermair.
Conf. 9. l. 2.

IX. I have often with admiration considered the incredible effect of *Balsamus sulphuris anisatus, terebinth-natus, &c.* in the cleansing and healing of Ulcers, if a little of it be dropt into the Ulcer, for the generation of new pus is presently so abated, that oftentimes by the help of this Balsame alone they have been cured in a few days, in the Breasts, and in other parts, after inflammations and notable imposthumes. From this experiment I reckoned, that the cleansing and healing of Ulcers, which follow imposthumes, consists in the correction of the Acid and Corroding Pus, which sticks to the Ulcerated part, and corrupts and turns into new pus, in some measure at least, the Blood designed to nourish that Part: And that the Pus is corrected by the Balsame of Sulphur, especially upon account of the aromatick Oyl, which abounds with an oylly volatil Salt, whereby the acid Spirit that abounds in the Pus, and corrupts the blood every day into Pus, is not only made dull, but so sweetened and amended, that the affluent blood quickly repairs the Parts formerly consumed, and perfectly heals them up.

Sylvius de le
Boë.

X. A Medico-Chirurgion had a Matron under Cure, who had contracted a *Fistula* in her Leg after an imposthume, which he had had six Months under Cure. At length when *M. J. Griffonius* had searched it with a Probe, and knew the only cause which hindered the healing of it up, was the thinness of the Skin, covering the Ulcer, he quickly put her in heart. Therefore, when her Body was Purged and prepared, he eroded the thin Skin with a caustick, and of a *Fistula* made an oblong Ulcer; after the fall of the Eschar, and the Ulcer was cleansed with ointment of juice of Smallage, in three Weeks or a Months time he successfully cured it.

Hildanus
cent. 5. obs.
79.

XI. I have more than once seen upon the Plasters of fistulous Ulcers, little Animals, like waxen Mites, whereof not only the figure but the motion might be seen: Thus we are held of many Diseases, which come from invisible Animals, such as are those called *Cyrenes*, the Itch, Ring-worm, &c. as may be perceived by Microscopes. But to cure Diseases coming from Animals, which always are attended with an Itch, Aloes and Mercury mixt with Butter must be used. The Famous *Dr. de Mayerne* observed in the cancerous Breast of a Woman, that was cut, thousands of Worms, Thence perhaps it

is,

is, That the progress of the corrosion in a Cancer is stop'd by applying the flesh of a Chicken, to which these Animals stick, leaving that which is worse and not so sweet.

Barbette. XII. When the coat, that covers the Glands, is either corroded or cut, the skin cannot be healed, till the Gland and Skin with all be consumed with the Ulcer.

Idem. XIII. If eating Medicines cure not the Ulcers in the Glands in a few Weeks time, we must know, that there is no hope remaining of a good Cure, because of the continual afflux of humors. And this is the reason, why we are often forced to cut them out.

Idem. XIV. In the cure of an eating and Malignant Ulcer we must observe, 1. That Medicines must be changed every 3 or 4 days, for Nature uses to refuse the best things, if they be often applied. 2. You must not open it above once or twice aday at most, unless the matter be too sharp, for otherwise, the Medicines will not sufficiently perform their operation. 3. Repellent and Mercurial Medicines must not be used in this case, unless you keep the body continually Purging. 4. These Sores can seldom be cured perfectly, without taking Purges, and drying decoctions of China, Guaiacum and the like.

Riverius, Cent. 1. Obs. 212. XV. A Woman of sixty had an Ulcer in her leg as broad as the Palm of ones hand, livid and foul, having hard flesh, deprived of all sense, so that it might be cut without pain, which proceeded from an Atrabilarious humour, burning the substance of the Part. Having put her in a cooling and moistning course of Diet for several days, she took once a Week a loosning Pilsan, she had a Semicupe to correct the Intemperature of her Bowels. Red Mercury Precipitate was applied to the Part, to eat away the dead flesh, and having made a pretty deep eschar, Emplastrum Sticticum Crellii was applied to the Ulcer; by the benefit whereof in a Month it was filled with Flesh, and brought to a Cicatrice.

Idem. XVI. It often happens, that when much humors run to the Gout, the Veins in the Legs are distended, not without redness and swelling all about. Platerus pr. med. p. 717. approves of cutting them out, in the same manner as is most usual in varices: For by the same means it may come to pass, that when much blood is intercepted, which used to run to the Part, it ceases; Only this is required, that the Veins appear high, because of the quantity of Humors, and not lie hid and obscure, so as the Flesh must be cut out with them. And know, Reader, That this cutting out of the Veins has ever been found by me, to be good for drying up and putting an end to old spreading Ulcers; Only have a care that a gathering and swelling do not rise, therefore the end of the lower Vessel must first be well squeezed out, and then it must be treated with driers and such things as strengthen the nature of the Part. And it will not be amiss to use restringents, till the humor leave off flowing thither.

Idem. XVII. Cutting out is due to putrid Ulcers, as a thing necessary above all things, that the sore may not spread infinitely. For as the rottenness in an Apple, if as soon as it is known, it be carefully cut away, goes no farther, but if it be let alone, it rots all: So an Ulcer, if what is putridified be cut away, it heals and is at an end; but if that remain, it eats and dissolves whatever is whole.

Idem. XVIII. Some Ulcers, though they do not appear such outwardly, nevertheless you may know them. 1. In that they have changed their natural colour into a very strange one, they are generally black or livid. 2. They have a great number of Pusules upon them like Caruncles, with little holes in them, and you cannot tell whether to call

them Tumors or Ulcers. 3. Many and the most efficacious Medicines do no good. 4. There is a certain pricking pain here and there in them, and the effect shews the sore to be abundantly worse, than it any way appears to be. I remember I once cured such an Ulcer, which I could never have conquered with the best Medicines, had I not cut it out. When it was opened, putrid and pallid Caruncles appeared, the skin lying false upon them.

Idem. XIX. A Girl above five years old had white, hard swellings prominent up and down the Body: They continued for a month or two: Divers Medicines are made use of, by which at length they are softned, and turn into Impothumes, for curing of which several Medicines were used, but in vain; for the Ulcers not only grew greater, but increased in number. A Physician being called, first Purged her, and then gave her a decoction of the Woods for above two Months: Proper externals were also applied, whereby it was effected that one or two of the Impothumes promised a Cure, yet a new swelling arose somewhere else, which turned also into an Ulcer. This Cure was so long continued, till the Eyes first swelled and ran, and then, and afterwards threatned blindness. When the Eyes were cured, the Ulcers, that before were healed, opened again; and when the Ulcers were healed, the Eyes began to be ill. At length they left off all Physick; and the making of an Issue in the left Shoulder, did so much good in process of time, that the Maid recovered perfectly of her Ulcers and sore Eyes, the Issue running store of serous humors.

Idem. XX. If the lips of the Ulcer be hard and callous, and the hardness will not give way to emollient and discutient Medicines, Galen 4. meth. cap. 2. Shows in what manner such an Ulcer must be cured; When only the lips of an Ulcer are discoloured and over hard, they must be cut away as far as the hard flesh goes; But when such a sore is gone far, the question is, whether all that appears preternatural must be cut off, or time must be allowed to cure it. Without doubt the Patients pleasure must be followed in this; for some had rather have the sore a long time incuring, than be cut; others are ready to undergo anything, so they may but be quickly cured. For such Ulcers are the soonest, yea the safest cured, if the hard and livid flesh be cut out with a convenient Instrument, to the sound; for the Pain is both shorter, and no ill quality is communicated to the Part, as there is by eroding Medicines, the green Water, Oyl of Vitriol, &c.

Idem. XXI. If a dry intemperate be joyned with an Ulcer, the cure of the Ulcer may in a manner be neglected for some time, and the Intemperature must be opposed, till the Part be restored to its natural temper.

Idem. XXII. When an Ulcer, is often renewed, it always gives suspicion of the bones being corrupted, as both Galen and Paul say. We may often observe this in rottenness of the Teeth, out of which corruption oozes out by the holes of the Bone in the Jaw, and raises an Ulcer outwardly in the Jaw, which though it be healed, yet after a little time the Cicatrice breaks again. Therefore, if such an Ulcer appear in the Jaw and be often renewed, the Teeth must be looked into, and if any one be rotten, it must be drawn. For the Ulcer will not heal perfectly, before the Tooth, which occasion'd it, be drawn.

Idem. XXIII. In such an Ulcer with caries (or rottenness) in the Bone, if the Corruption be so great, that it cannot all be removed by Medicines, there is need of Surgery, and the corrupted Bone must be taken away either by Abrasion or Burning. And two Instruments are here requisite for Abrasion, the Scalprum (or Scraper) and the Terebra (the Trepan or Wimble) the Scalprum is of use, where the Bone is not corrupted deep; but the Terebra must

must be used, if the rottenness penetrate deep. Concerning Abrasion *Celsus lib. 18. c. 2.* writes, "He that scrapes these, must set his Instrument on boldly, that he may do something, and that quickly. He must give over when he comes to the white or solid bone: It is plain, that the blackness is gone, when the white appears, and the caries is gone, when a Man comes to the firm Bone. And some Blood comes, as is said before. But when it goes deep, the case is doubtful. In a caries indeed, the knowledge is easie: A small probe is put into the hole, which as it enters more or less, shows either that the caries is deep or shallow. Blackness also may be gathered from the pain and Fever; which when they are moderate, it cannot be deep, yet it is more manifest by the trepan: for there it ends, where the dust ceases to be black. Therefore if the caries go deep, holes must be bored thick and as deep as the Bone is foul, then red hot Irons must be run into those holes, till the Bone be perfectly dry. For after these things, all that is foul of the Bone underneath will be wasted, and the Sinus will be filled with flesh, and either no Humour will come at all afterwards, or but very moderate. But if there be blackness on one side, and the caries run to the other, it must be cut out, for all that is foul must be taken away. If it be found underneath, it must be taken away as far as it is corrupt. And whether the Bone be the Skull, the Bone of the Breast, or a Rib, when it is corrupt, it is useless, and there is a necessity to cut it out.

XXIV. From which it appears, the Antients after scraping of the Bone, also burn it; because burning is a most present Remedy to consume excrementitious humidity. But we must have a care, that in applying the Caustery, the adjoining Flesh be not also burnt. Therefore the Causteries must be applied through Iron pipes, by which the flesh may be defended; several of which must be in readiness, that when one is grown hot, another cold one may be used: Or, if you will use but one, when it is hot, put it in cold water. What moisture soever oozes out at the Bone, must be wiped with a sponge or a cloth, lest it corrupt the adjoining parts.

XXV. A Man of Forty had a Malignant and inveterate Ulcer in his left Leg, with a Varix of a vast bigness, for it was almost as thick as my Arm at the Wrist, and near a span long: and it began almost in the Ham, and went down towards the Foot, and took a compass and made two circumvolutions. But, which is remarkable, as soon as he lifted his Leg up on high, the Blood went away presently, but as soon as ever he set it to the ground again, it was as big in a moment, and in a word, the Blood ran backwards and forwards, sometimes one way, sometimes another, just as if it had been in a pipe. Moreover, because varicous Ulcers can never be healed, till the varices be cut out, I thus went about the cure; Having put him in a good course of diet, and purged his Body several times, and bled him in the Arm on the same side, I laid him on a Bench, and in the Ham separated the Skin gently from the Vein, and then with a double thread and a crooked Needle I encompassed the Varix; and at the lower end of the Varix I went the same way to work: But before I tied the thread, and made a knot, I ordered him to set his Leg to the ground, to the end that the Blood might, as it used, come down: for I was afraid, that Blood might do some harm: Then I tied the thread strait at the upper end of the Varix, and made a knot; and afterwards at the lower end. Which being done, I opened the Varix near the upper knot, that the Blood contained in the Varix might come out: But when more Blood came out, than the Varix could contain, and I looked narrow-

ly on the place, I found a blind duct which entred the Varix near the lower ligature; Because it could not be tied with a thread, I applied a little escharotick unguent to the Mouth of it, and afterwards our powder to stop Blood, with the white of an Egg, and then bound all with a fillet dipt in oxybate, and left it till the next day. Afterwards I cured the wounds as other wounds. In the meantime I omitted nothing about the Ulcer, that seemed necessary, and I purged his Body now and then. So by God's blessing he recovered, and is hitherto well.

Hildanus, Cent. 4. Obs. 85.

XXVI. I must not pass this over in silence, when Melancholy, like Lees in Wine, settles in the bottom of the Vessels, and by reason of its grossness resists Medicines in purging of the Humours, Galen prudently begins with bleeding in the cure of a Canker, Leprosie, and malignant Ulcers. Therefore *lib. de medicamentor. comp. n. 7.* he glories, that he began the cure of a malignant Ulcer in the Leg, encompassed with varices full of black Choler, with Phlebotomy, afterwards he purged Melancholy, then he cut the Varices a cross, and so he happily cured the Ulcer, which others could not cure.

Langius, Epist. 17. l. 1.

XXVII. In curing of Ulcers nothing creates a Surgeon greater trouble than a Caries in the Bone; especially if it be deep, because of the Humour in the Bone. For the drying up of this Humour, and falling of the Bone nothing is better than an actual Caustery. Next to this *Euphorbium* has the second place, which because it is sharp and hot in the fourth degree dries up the Humours in the Bone, and besides seems proper for it by an occult quality. But *Dioscorides* and *Avicenna* advise, that, if any do use *Euphorbium*, he guard the flesh near the Bone with Liniments, because of its extreme sharpness, lest by touching the flesh, it raise an Inflammation. Therefore it was a good while, ere I durst use it, for fear of Inflammation or pain; yet by degrees experience taught me, that though it bite the Tongue and Nose extremely, yet in Ulcers, though it be strewed on plentifully, it causes no Inflammation or pain. Therefore I use it with good success for carious bones, bare of flesh, even when the Lips of the Ulcer are diminished, strow-

Hildanus.

XXVIII. If Sarcoticks weaker than they should be, be made use of, great store of Sanies is gathered in the Ulcer, and soft and flaccid flesh is bred: And if over strong and drying things be used, the Ulcer grows dry, the Lips are red, and the flesh is consumed, bloody matter also comes, and pain is found in the place: But if the part grow red and dry, as it ought naturally, and no corruption run out of the Ulcer, and a good colour appear in the flesh, it is a sign of a good Sarcotick Medicine.

Sennertus.

XXIX. If the Ulcer be with a dry Intemperature, Moisteners are required: Here warm water is good, if the Ulcer, or rather the parts near the Ulcer, be bathed with it: for although *Hippocrates lib. de Ulceribus* shows, that all the Ulcers must not be wet, except it be with Wine, yet *Galen* writes that no moistening thing is good for Ulcers: But he means, that Moisteners are not good for Ulcers, as such.

Idem.

XXX. One had been a long time ill of foul malignant Ulcers in his Feet. He applied several things; he drank many sweating Decoctions and Specificks, but all in vain. At last he was anointed with Quick-silver, as People are for the Pox, and he was fluxt and cured successfully. But why does *Mercury* cause Salivation? By its great tenuity of parts it powerfully dissolves, melts and softens, therefore either applied or taken, whatever familiar and connate Humour it has by degrees melted, it carries it all by the Glands, and Salival Vessels into the Jaws, and Mouth, and it comes up neither by Coughing nor Vomiting, but by continual spitting.

Thiermaie.

XXXI. A

XXXI. A reverend Divine of a good age, having laboured some Months under an Ulcer on the inside of his right Leg along the shin Bone with much pain, sent for me. The part affected was distempered with great heat, and the Ulcer discharging a *Sanies*, endeavours had been used to digest it with Turpentine and the yolk of an Egg, and such like unsuccessfully. I fomented the Ulcer and Parts about with Claret Wine, and dressed it with 2 parts of *Unguent. diapompholyg.* and 1 part of *Unguent. basilicon majus* with *Præcipitate*. Upon the Lips of it I applied Pledgits spread with *unguent. diapomphol.* and an Emplaster of some of the same *diapomphol.* over all, with Compress wrung out of the Wine, and rowled it up lightly, placing his Leg in Bed as before. The next day I brought a Decoction of leaves of Plantain, tops of Bramble, Horse-tail, flowers of red Roses, and Pomegranate flowers, to which I added some Wine, and while it was heating, I took off the dressings, and found the heat somewhat allayed, and the Ulcer well disposed to digestion. I stupefied the Ulcer, dressing the parts about with *unguent. Tutia mag. Vig.* and rowled it up as before. By this method the hot intemperies removed, and the Ulcer digested: after which by the help of *unguentum defecativum*, and the Alom-stone I cicatrized it firm, to the satisfaction of the Patient and his Relations, leaving him again to the care of his Physicians Sir Alex. F. and Sir Fr. Pr. by whose order I made him a Fontanel, and some while after put him on a laced Stocking.

XXXII. A Maid of about 35 years of age, of a Scorbutick habit of Body, had an Issue made in her left Arm, which was continued running many years; but at length, whether through negligence or from some other reason, she suffered it to dry up. The Winter following she grew very much out of order by reason of a great complication of ill Symptoms, of which the most important was an intolerable pain in that Arm and place where her Issue had formerly been. After various courses of Physick and external applications, she was in some measure relieved, and was pretty free all the following Summer: but in the Winter, viz. 1672. her pain returned with such violence, as to afflict not only the place of the Issue with such pains, that she likened it to the cutting off of the Arm, but it stretched it self in a while after to the whole Arm, Shoulder, yea the very side it self; so that many attempts being made, the Chirurgeons in the Country opened two Issues on each side of the seat of the old one. Many other things were done, till at last she came into my hands. Dr. Walter Needham was her Physician, and upon examination found her afflicted with a Rheumatism, for which he instituted a convenient course, and judged withall that the pain of the part was from the usual way Nature had taken to the old Issue, whither the sharp Humours making their passage, and finding no vent, did disperse themselves through all the branches of the Axillary Artery on that side, viz. to the Scapular and Thoracick branches, &c. the Pain being every where found, according to the place of their distribution. To the cure of this, besides what was inwardly administered, it was thought requisite to eat down deep by a caustick, into the place where the old Issue had been, and thereby to divide the Fibres of the Membrane of the *Biceps*, which lay just under it, and seemed to be the place of the principal pain. When this was done, we divided the Eschar, and cut it out, then filled the opening with *Præcipitate*, and applied a Pledgit of *Unguent. basilic.* With Oyl of Lilies upon it, and dressed it up. We dressed it every other day, till the remaining Eschar and Slough separated; then we incarned and cicatrized the Ulcer even. From the time of the opening this her Pain ceased, and she was well of that, but laboured under a Rheumatismus in great measure, it swelling her Thigh, Legs, Hips, and

lower Belly; but by frequent Phlebotomy, Purging and other Prescriptions, she was by my said Friend happily cured.

XXXIII. A Maid Servant living in a Noble Family had cut the inside of her right Leg by a fall upon a hot Grate-Iron, and having suffered about eight Weeks under ill Chirurgery was commended to my Care. The Ulcer was with loss of substance and sanious, with some pituitous swelling in the Lips and Parts about it. I dressed it with *unguent. basilicon* mixt with *Præcipitate*, 1 drachm of it to an ounce of the Unguent. I applied over it a Plaster of *diachalcit.* sprinkled with a little Vinegar, and a Compress wrung out of Oxycrate, then rowled it up with the expulsive Bandage; the Cure indeed consisting mainly in the well rowling, the want of that causing frequently crudity in the Ulcer. By the use of it both the Influx was restrained; and the member strengthened, and with the help of the Unguent aforesaid it was digested: as the Lips flatted by virtue of Compression, it incarned; and by *unguent. Tutia* and Pledgits dipt in Lime water cicatrized in few dayes, without Purging or Bleeding.

XXXIV. A Gentleman of about twenty years old, of a good habit of Body, put himself into my hands for the cure of an Ulcer on his right side the breadth of the palm of the Hand. It was occasioned by a burn, and had been bigger. The cause why this remaining part of the Ulcer did not cicatrize, was most evident, it being over-grown with loose Fleth. I applied Pledgits of a mixture of *unguent. basilicon* with two parts *Aegyptiacum* upon it; with Bandage: but observing it not to yield to that so soon as I designed, I levelled it with the Caustick stone, and after separation of the Eschar digested the Ulcer with *unguent. basilicon* and *Mercury præcipitate*, and afterwards cicatrized it.

XXXV. A young Man by some accident bruised the back of his Hand: it inflamed and apostemated; and after some while terminating in a sinuous Ulcer, and underneath corrupting the Bone, I was consulted, and advised the way of dressing it: but that method not being observed, other Bones of the Hand became carious, and the Hand in great hazard of being lost. Upon which he was commended to my care. Sir Alex. Fras. being present, I took off the dressings, made a search with a Probe, and felt the Bones leading to the two middle Fingers bare, rough, and as I suspected, rotten. The Orifice being small, I applied a Caustick large enough to make way for the taking out those bones; then divided the Eschar and dressed up his Hand with Digestives, Emplaster and Bandage. Sir Alex. Fras. prescribed him a vulnerary decoction, and left the prosecution of the cure to me. As the Eschar separated, I saw the Bones leading to the two middle Fingers black, and softened with putrefaction. I laid hold on the one with my forceps, and pinched it into pieces with much ease, bringing part of it away. I fomented the hand with a Decoction of Wormwood in Wine, dissolved a little *Aegyptiacum* in some of it, washed the Ulcer and applied a Dressing dipt hot in it upon the Bone, and *unguent. basilicon* over the Eschar. I then pinched out what was most rotten, dressed the remaining ends of them with a mixture of *unguent. Aegyptiacum*, Spirit of Wine and extract of *Scordium* actually hot with an armed Probe, applied Pledgits of the same upon the Bones, rubb'd the loose flesh in the Ulcer with a Vitriol stone, and laid *unguent. diapomphol.* upon Pledgits over the tender edges of the Ulcer. By this way of dressing I deterged the Ulcer; and at several times pinching out those rotten Bones, that led to the two middle Fingers, disposed the rest to cast off. During which I laid the Ulcer higher open to the joynt of the middle Finger: which knuckle I also found rotted to pieces, and took out what would come easily away; then dressed the

N n n remaining

remaining *Caries* as the other in the Hand, and after some time made a separation of the *Caries* there. Having the while digested and healed the Ulcer I first laid open, I also cicatrized this part, and dismissed the Patient well cured, as I thought. But some while after he came to me again with a Tumour upon that Knuckle of the middle Finger, from some remaining splinter of a Bone. I laid it open, and took that out. While I was curing this, I observed a small opening, with a Tumour near it as big as a small Hazle-nut, upon that part of the Bone which led to the Fore-finger. I opened this by Causticks, and discovering part of the Bone black, pinched it off, and dressed the remaining end with *Aegyptiacum* scalding hot upon an armed probe. I kept the Ulcer open with Dossils prest out with Spirit of Wine, till I made separation of it, then cured this Ulcer also. And from that time, which is more than 5 years he hath continued well, and his Hand is firm and strong; Nature having supplied that loss of Bones with *Callus*. But he beareth the Marks of the Disease, which will assert the truth of what is here delivered.

Idem. p. 188.

XXXVI. A Daughter of a substantial Citizen laboured under an Abscess in the Region of her left Kidney, and was long treated by a bold Empirick, who promised Cure: but after all his endeavours the Child languishing under the Ulcer, sometimes by the great discharge of matter by Urine, and other times through the suppression of it, great pains were stirred up within the Body, and outwardly in the Abscess. I, being consulted observed the external Abscess took its Original from the Ulcer within the Kidney, and required another manner of dressing, its Cure being the work of time. I proposed the laying it open to the very part where the matter passed forth from the Kidney. To which purpose I applied a Caustick upon the *Sinus* below, divided the Escar, and dressed it up with Lenients. Then after separation and digestion of the Ulcer, searching the same with my Probe, I found the *Sinus* run up above the Orifice; which being also laid open, I discovered the passage into the Kidney, and felt the side of the last short rib bared by the matter in its passing out. I dressed the Ulcer with *mundifex Apio*, and healed up the remaining *Sinus* above and below to the very Arperture. While I was doing this work, Doctor Barwick was consulted to help us in the Cure by Internals, who prescribed a Traumatick decoction of *Sassa*, &c. with the more temperate Plants and balsamick Pills to temperate the Humours. During my disposing of this Ulcer to retain a *Cannula*, the Matter discharged by Urine in great quantity, and the Patient was as sorely afflicted and had the same Symptom that others have who are diseased with Ulcers or Stones in their Kidneys, but after vent was given by a short *Cannula* of Lead she recovered. Having continued the use of the *Cannula* some months, I removed it and kept a Pea just in the opening, and by red Sparadrop and compress retained it on, then left her to her Mother to dress, and only called sometimes when they gave me notice of their wants. After a year or thereabout that she had kept this fontanell open, the internal pains and discharge of Impurities ceased, and she grew more fleshy and strong. She went also dayly to a neighbouring School, where she was exercised in dancing, &c. After the space of two years or thereabout, the Ulcer seeming not to matter more then might be expected from a small fontanell, the Mother cast out the Pea, and permitted it to heal up. But being soon alarm'd by the old Accidents, which returned upon the Child, she sent for me. I opened it again, and left them to keep it so. Doctor Barwick was also again consulted, who repeated the former Method with some little alteration. The Ulcer was afterward kept open near 3 years, during which the

she repeated her course of Physick Spring and Fall, and was frequently brought to me. At length I seeing her well grown, and of a fleshy and healthy Complexion, and the Fontanell in a manner dried up, I advised them to throw out the Pea, it being of no use. They did so: from which time the Patient hath continued strong and well and is since married. *Idem. p. 206.*

XXXVII. In the cure of deplorable Ulcers, which cannot otherwise be cured for much ferocity, as in a contumacious Itch, the Small Pox and Meazles, I have often experienced the happy energy of *Antimonium Diaphoreticum*, *Regulinum* or *Cerussa antimonialis diaphoretica*, which Schroder l. 3. Pharmacop. describes. Yet you must know that you must continue the use of it, as of all things that purge the Blood, for 2 or 3 Weeks. Then it will have a better effect, if vulnerary essences of the woods be made use of between whites, by which means internal Wounds and Ulcers will be quickly cured. It is indeed a Medicine that excels all Decoctions of the Woods, and all magisterial Potions. Outwardly it dries, wherefore it may beneficially be prescribed in cosmetick waters, as Bean water, *Solomon's Seal*, *Hepatica nobilis*, &c. against spots in the Skin. It makes the Skin clean and fair; it may also be prescribed among cosmetick Unguents for fissures and chaps; The Dose is from half a scruple to half a drachm. *Hofmannus.*

XXXVIII. A Vomit is of use to Physicians that cure Ulcers or Wounds, and at divers times. 1. When the lower parts being afflicted, we prevent a greater mischief from purging downwards. 2. When the upper parts are ill. 3. When the peccant Humour is of such a nature, that it is difficultly carried downwards, and easily upwards. 4. When no inward part being afflicted, we chuse a Vomit for revulsion sake, as in Diseases below the Girdle. 5. When there is Matter in and about the Stomach, which feeds the Disease. 6. If the Patient be not eafie to be wrought upon by a Purge, and therefore violent Medicines be necessary, such as are dangerous for the Patient. 7. When the Stomach will not retain a Purge, but throws it up again. 8. When no benefit has been found from several Medicines, that have been given. 9. When after gluttony and high feeding, the Belly is full of mucous and slimy Phlegm. *Severinus.*

XXXIX. By means of a *Sanies*, that makes its way by a sharp and nitrous quality, it often comes to pass, that an Abscess, Ulcer, or *Fistula* has two or three holes: Which sort of Ulcer a Man can scarce heal up with his utmost Industry; both because, that when one hole closes up, it makes the other wider, and because between the holes there is often a partition of callous Flesh or Skin. This Ulcer most endeavour a long time in vain to close up with Medicines; others, although they know the difficulty, yet know not how to help it. In the mean while by their way of cure it is protracted a long time unhealed, which yet of its own Nature were eafie to be cured, if it were treated by Chirurgery properly so called. Indeed I do not deny, but one may break the partition between the *Sinus*'s with Septicks, but not without either the great disadvantage of pain, or the inconvenience of Inflammation. Moreover section is the more expedite, and alwayes the safer way, it is only required, that neither the Physician, nor Patient, either or both of them, be affrighted with a shew of evil. I say a shew; for often where bungling Surgeons are afraid to use their Knife, I have been of better courage, and found no danger. Of a great number of which, the chief is the eldest Son of the King of Feg, in whom under the *Perinaeum* I cut open two Ulcers, which corresponded by a common *Sinus*, at a great distance. *Severinus.*

XL. A Woman had an external Ulcer in her nether right jaw, not far from her Chin, which was open

open for several years, and could not be cured. I gave her a purge, and Cerufs of Antimony, with cephalick Conerves in form of an Eleſuary; and in a ſhort time the Ulcer was dried up and healed, without the help of external Medicines.

Benivenius. XLII. A young Man had been ill of an Ulcer in his Chin for 3 years, which reſuſed all Medicines. Some Phyſicians, conſidering its deepneſs and calloſity, affirmed it could not be cured without fire. Others, becauſe of the callous Lips thought it a *Chironium*, and therefore that it could not be cured at all. But, the nature of the Ulcer being conſidered, I denied it could be cured, without a tooth were quite pulled out, which when it was done, it was found rotten at the root, which was the cauſe of the Sore, and in a little time after was healed with ordinary Remedies.

XLIII. In the year 1664. a Student by my advice, who had a tedious Ulcer in the inſide of his Leg, uſed common Remedies to no purpoſe, and would not be fluxed, but went to *Viridungum*. After he had taken the Waters, according to the ordinary preſcription, for 20 dayes, he purged not at all. Which is the uſual effect of thoſe waters, but he made abundance of Urine: And in 3 Weeks time his Ulcer dried up and he was well.

Barbette. XLIII. Ulcers in the Feet, eſpecially about the Inſtep, create the Chirurgion much trouble and pains, becauſe all the Humours of the Body ever run to thoſe parts, and this is the reaſon, why they reſuſe the beſt Remedies. But if the Foot be bound hard, beginning at the lower part and going up to the Knee, and the Patient be purged once or twice a Week, the cure will ſucceed, as well as one could wiſh.

XLIV. In Ulcers of the Feet we muſt not preſently proceed to heal them, when the Patient is enclined to worſe Diſeaſes: for it is to be feared, that the fluxion, cauſed by Nature's goodneſs, might be hindered by over haſty cloſing, and recur to the inner noble parts, and there cauſe greater inconveniences: If therefore Ulcers of the Feet ſeem over troubleſome, having purged, bled and ordered a better Diet, make an Iſſue in each Foot, and then heal the Ulcer.

XLV. A young Man had had a Contuſion on his great Toe, it inflamed and ulcerated: When it was grown inveterate, and could as it ſeemed, be cured by no Remedies, he came to me; His Toe was ſwelled and inflamed: On the outſide of it there was an excreeſcence of Fleſh, as big as a Bean, which covered almoſt half the Nail: The Barber-Surgeons had ſeveral times waſted it away with cauſticks, but to no purpoſe; for whatever they waſted in the day, it grew up again, like a Muſhrome in the Night. I, enquiring out the hindrances of cure, found the Nail under this Fleſh extuberant, and ſeparated from the Fleſh underneath, which therefore did prick the found Fleſh continually towards the root of the Nail, cauſed pain, and attracted the Humours plentifully. When the cauſe was known, I put the Patient in hope of a ſpeedy cure: Therefore having purged and bled him on the ſame ſide, I ſtrowed ſome burnt Alom powdered upon the excreeſcence of Fleſh: And I applied to his Toe and to his whole Foot a cooling and anodyne Cataplaſm; Take of Bean flower 2 ounces, powder of red Roſes, Pomegranate flowers, and Cypreſs-nuts each 2 drachms, Saffron half a ſcruple. Boyl them in Plantain and Roſe water, and a little Vinegar. Add towards the latter end, the yolk of an Egg and a little Roſe water. Apply it warm. With this the pain and ſwelling abated much, the excreeſcence of the Fleſh was a little waſted, ſo that the Nail, ſeparated from the Fleſh underneath, which the excreeſcence of Fleſh had covered, came into ſight. I cut it away, as carefully as I could, with a Pen-knife and Sciſſers, and when I had ſtrowed on it a drying powder, and ap-

plied *Diapatha* plaſter, he quickly recovered. Hence let Chirurgions learn how much it concerns them, to know the cauſe of a diſeaſe.

XLVI. Frequently after the cure of an *Ichor* and a *Meliceria*, we find the joynt ſo ſtiff and hard that it can be bended neither one way nor other: Here oftentimes Chirurgions labor a long time to mollify the joynt, Ligaments and Nerves, but in Vain; for that *Ichor*, which flows from the whole Body to the wounded joynt, and has ſuch acrimony corrodes and waſts, firſt of all the ligaments and tendons, which encompaſs the joynt, and then the Cartilages, which cover the joynt. Hence it comes to paſs, that the Bones, being diveſted of their Cartilages and Ligaments, do as firmly grow together by a *Callus* (which I waſt the firſt that obſerved) as if there had never been a joynt there.

XLVII. Why is a full and a moiſt courſe of Diet bad for all Ulcers, and a thin and dry one good? Whether becauſe a moiſt Diet makes the matter of the excrements more fluid? for moiſture is terminated by any thing but it ſelf, and drineſs by it ſelf. Or is it, becauſe moiſture opens a paſſage? for Moiſture makes lax the paſſages, which drineſs ſtops up. And they flow, eſpecially when they are ſharp, and when the moiſture of meat and drink abounds: And a paſſage eaſily ſucceeds by theſe parts, which of their own Nature are apt to receive the excrements of the whole Body. Or is it, becauſe the Skin, among all its other uſes has this remarkable one, to retain the Humours and Juices, which run from within to the habit of the Body, and to ſtop them as it were, when otherwiſe they would eaſily run out and be diſcharged! So therefore as the want of Skin is the cauſe, why the ſerous Humour oozes out, it will be much more in ſick Perſons; like as in Plants and Fruits, when the bark of them is cut, the uſeful Humour runs out, ſo an Ulcer ceaſes not to run till it be cruſted over, nor does it ceaſe running in Plants, till the Cut cloſe up. Wherefore *Hippocrates lib. de Ulceribus* ſayes *The dry is next to the ſound, & the dry is ſound*. Or is it becauſe of weakneſs, for which the part does ill receive much adventitious moiſture whether excrementitious or uſeful, and waſts the moderate heat, and is diſtempered, ſo that it can neither concoct nor aſſimilate the ſame? Wherefore it is ſaid by *Arnaldus doct. 5. cap. 18. Aliment attracted, and not incorporated, turns to fanies*, and therefore ſuperfluity of Aliment hurts wounded perſons. Or is it, becauſe by how much more aliment comes to the parts, by ſo much more Excrements are bred? And this being poured in plentifully infects and ſpoils the place. Moreover *Hippocrates* writes *l. de nat. human.* that when an Ulcer cannot be healed of a long time, Moiſture is the cauſe of it. It is neceſſary therefore that the whole Body be dry, and that the part be dry, for the agglutination of an Ulcer. Or is it becauſe an Ulcer, that is moiſt by Nature, is encreaſed by the acceſſion of a moiſt diet, as withered Plants, when they are watered aſreſh, grow green again? But not only the Ulcer, but the parts about it grow moiſt and ſtiff with an inflamed or ſome other Tumour, without the ſoundneſs of which, the Ulcer can neither dry nor heal. Theſe are Reaſons ſufficient to reject a moiſt Diet.

Now a ſlender Diet is approved of in Ulcers, as *Euſtachius Rhodius* has obſerved, to the end, Nature may be more deſirous to diſtribute that which is ſcarce ſufficient for it ſelf: For an Empty Stomach attracts from all the parts round, ſo as that by long conſequence the circumference of the Body is emptied; And that ill Humours may be corrected by Nature's conſtant evacuation of them which would be hindered and diverted by plenty of victuals. Therefore *Hippocrates lib. de locis p. 47. ſayes, Whatever Diſeaſes turn to Ulcers, and are eminent above the reſt of the Body, they muſt be cured by Medicines and Abſtinence*. And a little after, *Proud and riſing fleſh, muſt be brought down by Diet*. But otherwiſe when the Bodies of ulcerous Perſons abound

Severinus.

Cacochymy, they will find huge inconvenience from a full and moist Diet. For 2 apb. 9. *Impure bodies, the more you nourish them, the more you hurt them.* Wherefore I use to say, that by a spare Diet much mischief, which would ensue, is retrieved.

XLVIII. If you would clearly know how hurtful an ill course of Diet is for Ulcers, I will propound to your consideration the evidence and experience of Apparencies, which have informed me when the Patient has been any way irregular. For the Sores continue a long time, and sometimes putrid and fungous caruncles breed in the Ulcer, sometimes callosities and other filth and tumors grow in them, sometimes there is a troublesome pain, and sometimes an Inflammation about the part, and an internal one too. To say nothing, how ill sometimes the Ulcer looks, and what a strange colour and stench sometimes uses to follow. The Patient must needs suffer these and such like things, who indulges his Appetite and crams his Gut, and has no command of himself. On the contrary he that can rule himself and his Appetite, will both quickly be cured and will feel none of those things I have spoken of. For as Celsus l. 2. c. 16. says, *Nothing helps a sick man more than seasonable Abstinence.* Here I will tell you mine own observation, which I have made by long experience, When I had a great number of Ulcerous persons under my care in the Hospitals at Naples, It is very pleasant to hear, how I used to find those out, that offended in their Diet, not only being able to distinguish the men and the time, but even the manner and how far they had offended: Because Ulcers are so quickly and easily altered according to what is taken inwardly. Therefore he that will, may observe this with me, The flesh of a Delinquent's Ulcer will look like the flesh of a Beast that has been soaked in water, answerable, that is, to the common cause of the affection, for the Ulcer is diluted by the fluxion of what is taken, as flesh is, when steeped in water. It fares otherwise with him, who is content with a little food: For his Ulcer will look red and clear, like Coral or the lean of a Gammon of Bacon, contracted and low; to say nothing of Pus, which will be laudable.

Idem.

XLIX. Whether may a large, but not a moist, Diet be allowed in Ulcers? Moisture is twofold in general, Evident, and extended in a fluid substance, this they call Actual; another only contemplable by reason, which they call Potential. Now, though we avoid formal moisture in right curing of Ulcers, this certainly must be very inconvenient, which makes it up in quantity, and so much the rather, because there are not wanting things, which have a potential humidity in them: Nevertheless we could not blame only the liquid moisture, were we to neglect that the other, which is latent in a great quantity of matter, and equivalent to the forsaide moisture must equally be avoided. Truly, the matter of the Blood is proportionable to the meat dissolved in the Stomach, and the Superfluities are correspondent in quantity to the Store of Blood that is bred. For even in meats, that are thought not to be moist, there is some portion of moisture mixt with them by Nature's workmanship. Wherefore there is no reason, why we should only decline an apparent humidity in Diet, and allow any other; both of them in their forms and modes are noxious: Wherefore in curing of Ulcers the Diet must always be as spare as it can be.

Idem.

L. Let no man deny Wine in Ulcers, if they be old, and not joyned with some hot disease, which we ought to fear either present or imminent. In new Ulcers indeed Wine must be avoided, because of Inflammation and those consequent mischiefs which Hippocrates mentions *initio lib. de Ulcer.* As much therefore as Wine is approved of in curing old Ulcers, so much is it condemned in new ones.

Idem.

LI. Hippocrates *lib. de Ulcer.* appoints Ulcerous Persons no other Diet than bread and water. But he speaks of new ones, and immediately explains himself, to prevent Inflammation and a Gangrene, and Convulsion of the Limbs. But he has not declared what sort of Diet is good for old ones. I think, for such as have gentle Ulcers, unless they have some great plenitude or some Disease depending thereon, or some eminent danger persuade the contrary, the eating of Flesh is not discommendable, especially of Animals, which use swift motion, and yield least superfluity, for they are of a good juice, as Birds of the Mountain, and four Footed Beasts, except Swine's Flesh, which is all bad, but the Feet. Perhaps Hippocrates his opinion of Eggs and new Cheese is no other; which is better verified, when Ulcers (as they mostly are) are hollow and sinuous: For what sooner fills the vacuities of the Flesh, than a congeneous substance, which by affording plenty of Blood fills the empty spaces of Flesh, and repairs them for healing up? Yet this is hindered, because from Flesh, a food of much nourishment, there is a great product of excrement, which is immediately carried to the Ulcer, as is said before. For Answer, we say, that there is a twofold moisture in any thing, either concocted, and well conquered by the heat, so as it contains little excrementitious and superfluous in it; Or there is much excrementitious and superfluous, and little concocted but corruptive. The moisture that is in Flesh and Eggs is rather nutritious than excrementitious: Therefore roasted Flesh, though it have more moisture in it than boyled, is more proper for Ulcers than boyled, as experience makes out. So that which is inconvenient for Ulcers, it contains alwayes much moisture, either in the whole Aliment, or in part: Such are Broths, Caudles, Grewel, Pot-Herbs, Sallers, juicy horary fruits (for such as are dried in the Sun or in an Oven are not condemned) Cucumbers, Fishes not Saxatil, Milk and all things made of Milk that are new; All these things are bad for Ulcers, and sharp things especially when they should fill up and heal. But of fruits you must except them that are of an astringent virtue, as Quinces, Medlars, Idem.

LII. I must in this place take notice of a common abuse practised by Physicians in ulcerous Persons and others, for whom, because they are of a good juice and temper the heat of the Blood and the Liver; they make messes of Cichory, Endive, Baglows, Parsley, Gourd, boyled with Flesh, or Sippets and Sops of Bread in them, and they think they are proper, but they are very inconvenient. For all these preparations, since they have drunk up much moisture, do, when it is digested in the work-house of the Body, remit it to the Ulcer: Wherefore while these things are used, it will be perpetually moist, and will never heal up. Therefore I cannot chuse but laugh at, or rather pity, those, who hoping to be cured in a Month, are not cured in a whole year: for how can Ulcers be healed, which are continually moistened with the humidity of Visuals? Idem.

Medicines especially made use of by eminent Physicians.

1. To cure all old Ulcers perfectly; Take quick Lime 2 pounds, pour to it 5 quarts of hot water. Let it stand till it cool, strain it through a brown paper, in which dissolve Mercury after this manner; Take of this water 1 quart, add 3 drachms of *Mercurius dulcis*, let it stand in digestion: You will have an inestimable Liquor. For spreading Ulcers; Take the water distilled off rotten Apples, dissolve therein a little *Mercurius dulcis* and *Saccharum Saturni*, filtre

filtrate them. It is a secret which cures Ulcers and *Fistulae* perfectly, if they be washed there with. ¶ The *Arcanum* of *Aristolochia rotunda* is also of great efficacy here; Take *Aristolochia rotunda*, pour to it some Spirit of Wine, let them stand in digestion, and the Spirit of Wine will be coloured, repeat this till no more will be extracted, then draw off the Spirit of Wine, till an essence remain as thick as Honey, pour to it some water distilled off rotten Apples, extract the pure Salt from the *Caput mortuum*, and add the rest, and so you will have the true essence of *Aristolochia rotunda*. ¶ This is a sure Remedy for Ulcers with worms in them; Take of Savin 2 handfuls, Camphire half a drachm, the middle rind of an Hazle 1 pugil. Boil them in a sufficient quantity of Wine, pour it into a Vessel, put the Ulcerous Foot into it, and immediately little Worms will come out Swimming upon the Liquor: Repeat this several times, and the Ulcers will be cured.

2. Black earth Snails, which are found creeping among the leaves and grass, without Houses, in Spring time, maled together, and applied to Ulcers, soften all Ulcers wonderfully.

3. To inflamed Ulcers apply the narcotick Spirit of Vitriol, which is made of calcined Vitriol and Spirit of Wine mixt together, and putrefied in a close Glas for a Month. This Spirit separated is good not only to allay all Inflammation, and pains of Ulcers, but of the Gout it self.

4. I take water Frogs and hang them in a Cucurbit, so as they may not touch the bottom and burn, and so the water, which is drawn off, get a strong Smell. I put fire under it, and draw it off gently in Sand, and keep it for use. For it is most precious in malignant and cancrus Ulcers, also in a *Polypus*, *Ozena*, and in Ulcers of the *padenda* and *sedes*, it extinguishes Inflammation and corrects malignity. I put not out the fire, till they be perfectly dry, and no more water will come over: but I keep that which comes last by it self, for it smells something strong, and is not so grateful in Ulcers of the Mouth and Nose. The Frogs thus dried I put into a melting crucible, and burn them to white ashes. They are good not only to stop Blood, but in all malignant and fœtid Ulcers, for if they be strewed thereon, they cleanse and correct malignity.

5. This is a most excellent Ointment; Take of Oyl of unripe Roses 6 drachms, Myrtle, *unguentum populeum* each 3 ounces, leaves of Plantain, Nightshade each 1 handful, shred them, and mix all together; let them stand 8 dayes, shaking them every day, then strain them, add to the colature of wax 4 drachms. Mix them upon the fire, till they melt, stirring them with a stick, when it is warm, add of Litharge of Gold 6 drachms, Cerus 2 drachms, prepared tutty 2 drachms, Camphire 1 drachm and an half. Mix them in a Mortar for 2 hours.

6. The root of Dragons is excellent for Cacoethick Ulcers.

7. The juice of Pimpernel with the purple flower, with the Herb, bruised and applied to malignant Ulcers, perfectly cures them.

8. Mercury precipitate corrected is a singular Remedy against all Ulcers.

9. Many in a deplorable condition have been happily freed from their Ulcers by a decoction of Mint, wherewith the Ulcers are washed Morning and Evening, and afterward some powder of Rue strewed on. ¶ Oyl of Sulphur, and *Emplastrum Diaphanum* anoynted and applied does the same.

10. Some cure the most desperate Ulcers with this mixture; They take of Mercury sublimate 1 drachm, they powder it very fine, they pour to it the best rectified Spirit of Wine 1 pound. They set it in a Glas Body in Sand, till the Sand grow hot and the Spirit of Wine burn, They boyl also

a drachm of *Lignum Guaiacum* in 3 pints of water half away, when the water is cooled and filtered, they add the said Spirit of Wine; which mixture is applied with lint and tents to the Ulcers.

11. Take of Salt of Litharge (it is prepared as *Sal Saturni* with distilled Vinegar) 1 drachm, Spirit of Turpentine 2 drachms, macerate them in hot Ashes, till the Liquor grow red; It is of admirable vertue in inveterate Ulcers, Tumours, and Wounds.

12. I have often experienced the following Plaster to be good. Take of *unguentum diapomp. diapalma*, *griseum* each 1 drachm, gum *Elemi* 2 drachms *Saccharum Saturni* 1 scruple, a little Wax. Mix them and make a Plaster. ¶ Spirit of Wine especially is excellent in deterging and cleaning putrid Ulcers; and therefore should be mixt with other Medicines.

13. The following unguent is effectual in absterging Ichors and foulness of Ulcers; Take of juice of Parsly half a pound, Myrrh 2 drachms, Turpentine 1 drachm and an half. Boyl them all together, make an unguent, wherewith rags and tents may be smeared and put into the hollow of the Ulcers, this cleanses well without any harm.

Vomitus, or Vomiting.

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Ba better.

I. Bleeding must of necessity be celebrated in an Inflammation of the parts, otherwise it does harm. ¶ A young Man of a good habit, upon the breaking in of a hot matter out of the right *Hypochondrium*, fell suddenly into vomiting, and could be cured by no means but by Bleeding, though the Physicians were very doubtful about it: for after it the intemperature of the Liver ceased. A Seaman, who had a vomiting and an appetite, could not stop it by setting a Cupping-glass to the bottom of his Stomach, but only by taking away some Blood; for when the hot evaporation of the Liver was abated, which did pierce the upper orifice of the Stomach, the Patient recovered.

Rhodius.

II. A Countryman, 34 years old, fell into frequent vomiting after his Meat, which lasted for some dayes, so that he had tried several Medicines in vain, and was in danger of his life: He at last was freed from his vomiting by applying only one Cupping-glass to the bottom of his Stomach twice after meat. And his weakness was such, that besides vomiting, he often voided a great quantity of Blood by his Nose: which Symptome nevertheless vanished with the rest by that only Remedy.

Rumlerus, Obs. 14.

III. The Excrements that stick to the Stomach are often a cause why men cannot keep what they take, and things that are impacted into its Coats, make it often vomit up, what it contains in its Cavity. Therefore a Vomit caused by Art, which may expel what sticks to the Stomach, or is impacted into its Coats, will cure a Vomit by taking away the cause; as a looseness and dysentery are cured by Purging and Clysters. Yet they ought not to be given rashly, but when Remedies, which are in their own nature contrary to the Disease, seem to give no ease. ¶ And it must be provoked by a moderate Emetick, not a weak one, such as warm Oyl; nor by a violent one, which draws from parts afar, as such as are made of Antimony; but with such as have a strong faculty of dissolving the glutinous humor; Such as *Gilla Theophrasti*, or *Vitriolum album preparatum*: Its Salt is more efficacious, which is made of Vitriol calcined to an intense redness. ¶ *Valleriola* is afraid to give a Purge to such as are troubled with a constant bilious or pituitous Vomiting, because it is presently brought up again by vomiting, and does no good, but a great deal of hurt, by irritating the Stomach, and disturbing the humors, and not evacuating them. But it is my Custom, and I have long experienced it, first to carry off the humor, that is the cause of the Disease, by vomit first, and then to strengthen the Stomach both by taking things and by applications, that it may afterwards contain the Purge. But they are in error, who immediately at the beginning stop vomiting with Astringents; for they fasten and retain the bad humors, which Nature endeavours to cast off, and which afterwards will prove the causes of grievous Diseases.

Vallesius.

Riverius.

Eucher. Med. Pract.

IV. Clysters are very good in all Vomitings, if we give them in a small quantity, and no strong Laxatives or Oyls: For if a great quantity be given, part of the Colon, which lies upon the Stomach, is full, and the bottom of the Stomach is pressed, and by that faculty, whereby it irritates the expulsive one of the Intestines, it provokes to vomits, as Experience shews in several. And strong ones must not be prescribed, because there are but few Excrements: Let them be made therefore of emollient Herbs, Seeds, and Flowers, that discuss wind, dissolving therein some *Mel rosarum*, *violarum*, *casta*, or juyce of *Mercury*.

Rondeletius.

V. After long vomiting, or when one cannot keep his food, let Clysters be given of a decoction of Capon, without Salt, Sugar or Oyl, but with a little Wine for Nutrition. A great quantity of these must be given, that it may go high, but not greater than can be retained: for when the Guts are empty, they draw such a Clyster, and retain it for their nourishment. It is the best way to boyl Anniseeds in

them, to make them dispel Wind: for the empty Guts are full of Wind, which hinders the Clysters from going in. Such Clysters should be given, as often as the Patient used to eat. For they will do good three ways, by nourishing, breaking Wind, and because, when the Stomach takes nothing, all motion therein to vomit is quiet, and the Stomach contracts it self.

VI. When a Woman in the Iliac Passion vomited most enormously, several Medicines did her no good, till *Horsius* gave her a few drops of *Elixir proprietatis Paracelsi*.

VII. A Gentleman 35 years old, of the Senatory Order, being subject to Diseases in his Spleen, was taken with a vomiting so unexpectedly, that he spewed in the Dishes at the Table: When he had taken the Waters called *Vicomitenses* in *Avernia* for a Month, he returned to his Country *Geneva* free of his Disease.

VIII. That cold water is proper in many Diseases coming from Bile, the Writings both of the Ancients and Moderns do testify. A certain Noble Lord, a Frenchman by Nation, at a certain time did upon his departure shew down too liberal a shower of *Bacchus*, born at the *Canaries*, upon the Company. The Courtiers his Companions, as they went home, were taken with vomiting: This looked like a Symptome arising from a Surfeit. Three days after this Nobleman was troubled in the like nature, but far more violently; for his Age was greater, and his Stomach more sluggish. I was called to ease his enraged Stomach: I endeavour to effect this with various comfortable Internals and astringent Externals. All was to no purpose; whatever he drank or eat, in the fermentation caused so much wind and trouble till the Vomiting gave him some little ease: I tried to allay the inflammation contracted from the flame of the Wine with vitriolated Juleps and Emulsions, but in vain: At length I conjectured that Vitriolate things did rather exalt the vicious ferment of the Stomach; and that Emulsions could not sufficiently correct that excess, because they are not so plentifully prescribed by Physicians, or cannot be taken by the Patients without Loathing. Therefore I proposed a most liberal draught of cold water, which could not encrease the ferment, but weaken it, by diluting it. He drank off a Glass that held 12 Ounces: The Stomach received its friendly guest most kindly, and kept it quietly without the fermentation hitherto usual. The Noble Person admired his quietness, and by continuing to drink cold water, did quickly, safely and pleasantly check all the violence of the raging *Archeus*.

Sigism. Graef. in Misse. 477. an. 4 & 5.

IX. Among Poysons which produce enormous, and for the most part mortal vomitings we reckon Arsenick, Orpiment, and corrosive *Mercury* sublimated; all which in respect of their manifest or latent acrimony are most happily tempered, and prepared for a more gentle excretion with oily things, as fat Broths, any expressed Oyl, Butter, &c. Among which Milk also uses to be coagulated by them, and voided again, wherefore it is good, inasmuch as these coagulating Poysons do more readily joyn themselves to it, and in that very thing lose their nocent Power.

Sylvius de le Boe.

X. If some malignity, as in the time of Pestilential Feavers, cause a troublesome Vomiting, it must be opposed, not with Purges or Vomits, but only with Cordials, taken inwardly and applied outwardly. ¶ In that which attends Malignant Fevers 1 Scruple of Salt of Wormwood, with half an ounce of fresh Citron juyce is a most excellent Remedy: For this besides its deterfive faculty saturates the peccant acidities; as also do prepared *Perl. terra sigillata*, *Bole Armenick*, with Rob of Corinths or Barberries mixt with Sorrel Water.

Eucher. Med. Pract.

XI. They that have writ of the Scurvy, almost all of them order Antiscorbutick Medicines to be given in Milk or Whey; And *Engalenus* writes that Vomiting

Frid. Hoffmannus.

ing in Scorbutick persons is better stopt with Milk than with Astringents: when yet Milk is easily corrupted, and breeds Obstructions; but it is good, because by its fat substance it greatly tempers the acrimony of the humors: For with how great acrimony the humors in Scorbutick persons are endued, the eating Ulcers in the Gums and Legs do sufficiently argue. I have seen Handkerchiefs of a thick cloth not only corroded by the Scorbutick Blood, that came out at the Nose, but the Washer's hands also exulcerated, that made them clean. Nor need the corruption of the Milk, or the procuration of Obstructions, be feared from it: for boyling and seasoning with Salt or Sugar will prevent these Mischiefs. Besides the Antiscorbuticks which use to be boyled in it, will sufficiently prevent such things. And I do not think the foresaid the only reason, why Vomiting is better stopt by Milk than by Astringents, but also because by its absterive faculty it cleanses those sharp humors, and carries them off by stool; whereas Astringents on the contrary detain them in the Body, and fix them more firmly to the Coats and Fibres of the Stomach; whence afterwards arises a perpetual vellication and an irritation to Vomit. And Whey is therefore given, because it not only tempers and cleanses the humors, but also because of its nitrosity, and therefore its volatil Salt, siezing the fixt Salt, which abounds in Scorbutick persons, it dissolves it, and makes it more volatil. ¶ In a Scorbutick Vomiting hot and sharp things are hurtful, and more exasperate the mischief: On the contrary, things that affuage pain, and qualifie the acrimony and scorbutick Salt, are proper, especially Goats Milk with juice of Water-Cresses or Scurvygrafs.

XII. The bending in of the *Cartilago Xiphoideis* (otherwise the falling in of the Breast) hurts the Stomach, and causes vomiting and difficulty of breathing, by hurting the Diaphragm: Therefore this Cartilage must quickly be raised, and set right again in its place. Some say it may be raised by applying a dry Cupping-glass to the mouth of the Stomach.

XIII. Vomitory Medicines taken unseasonably or in too great a quantity, and producing outrageous Vomiting, can only be checkt and conquered by Opiates. ¶ After the taking of a Vomit, motions to vomit are several times repeated, till the matter of the poisonous tincture be absterged from the fibrous crust of the Stomach, and at length be all cast up, to the end, that the Nervous fibres of the inner Coat may imbibe the Poyson of it no more. But it does not always so fall out that the vomiting is therefore at an end, but though the Physick be wholly cast up, and none of its Contagion remaining, yet oftentimes the stomachick Spirits being too much provoked, will scarce lay aside their fury, so that they are irritated by any other juice whatever (which the Nervous fibres imbibe) and are cast into emetick Spasms, and often repeat them. Wherefore that the vomiting may then cease, nothing potable, whether alimentous or Cordial, must be taken into the Stomach, but, a hot fomentation being applied outwardly, the Patient must go to sleep. Moreover, sometimes other humors expressed out of the vessels, and especially bile, poured out of the Choledochal passage into the Stomach, do not only add strength to the Vomit, but when its operation is over, continue further to provoke the Stomach, and urge it to excretory Contractions. For this reason, when bile abounds, seeing upon a small occasion it is called into the Stomach, very often a cruel vomiting with horrible Symptoms is caused by a gentle Vomit; for quieting of which, it is convenient sometimes to give a lenient Clyster, to the end the turgescit bile may be solicited downwards. ¶ In a *Hypercatharsis* caused by a Vomit, the Patient being laid in bed, must be carefully treated with Medicines both internal and external,

and first of all that the guests of the Stomach may be quiet, either a Warm Fomentation of a Decoction of Pontick Wornwood, Mint and Spices in Wine; or else a Tost of Bread dipt in warm Claret Wine, must be applied: Let a Clyster of Milk with Treacle dissolved in it be given: Let warm frictions of the Limbs, and strong Ligatures above the Knee, which keep Spasms from those parts, be used: Let the Stomach in the meantime, unless there be fainting, be kept empty: But as soon as it can keep any Aliment or Medicine, let some Cordial Water, or burnt Wine warm, be taken. In a great Perturbation, if the Pulse admit, a little Treacle or *Dia-scordium*, sometimes also a Solution of *Laudanum*, or *tinctura Opiatica*, will be proper.

XIV. Mr. Girardus, Seventy years old, a Senator of *Newenburgh* was troubled at times with vomiting of a very sharp and black humor; a cruel, piercing pain of his Stomach preceeded, he put his Finger in his Throat and brought up such matter. He desired Medicines of me for his Stomach; but I told him his Spleen must be cured, of which he said he was never ill; because he hated to take much, I prescribed him some lenitive Elestuary, *Catholicon* or the like, that the gathering of humors, and the fluxion of them to the Spleen might be prevented: He followed my advice for a Month, and he was so long free from his Vomiting and Pains. At length, as it is their Custome there, he went to a Priest, that practises Physick in the Territory of *Friburgh*, suspected of Magick: He prescribed him I know not what, after which he was worse; for he took his Bed, who before could go about his Business, and died in a few days, having been first troubled with a violent pain in his Stomach. His Friends desired he might be opened; I told them before, that there would be nothing found in his Stomach, but that they would find the cause of his Disease in his Spleen. And his Stomach indeed proved faultless; for there was nothing found there, but a few Cherry-stones, which he eat the day before; but the upper part (about a third) of his Spleen was quite wasted, as if it had been bitten off: We could not search any further, because of the unskilfulness of the Dissector, who was liker a Butcher than an Anatomist. This Disease came very nigh the Black Disease of *Hippocrates*, which he mentions *Lib. 2. de Morb. 1. 161.*

XV. A Merchant stopt a tedious Vomiting from a laxity of his Stomach, by taking for 40 days together fasting, 4 or 5 hours before Dinner, 2 or 3 ounces of Biscoft Bread, without Drink: for it soaks up the moisture, and strengthens the Stomach; *Pliny l. 22. c. 25.* gave light to this Remedy against a *Defillation*; which the Noble *Peireskius* stopt with a mouthful of dry Bread, and some odoriferous sweet meat.

XVI. It often arises from the Obstruction of the Arteries of the Spleen, and then the use of Martial Spaws is good. The Wife of Consul. *N.* 39 years old, her *Menses* flowing well, complained of her being troubled with vomiting every day, either before Dinner or Supper, with a dull pain in her left *Hypochondrium*, Head-ache, and a great anxiety of Heart. Various humors were brought up by Vomiting. First of all she was Vomited, then Purged, and outwardly strengthening Balsams were applied; but all in vain: At length she recovered upon taking Martial Spaw-waters in a Decoction of Apples.

XVII. A strong Man, otherwise well enough, had of a long time been ill of frequent Vomiting, he often used to cast up immediately what he had eaten. At length, being above all Remedies, the Disease grew to that pass, that he eat with a good Appetite, till the *Oesophagus* was full to his mouth, and then, nothing getting into his Stomach, he immediately Vomited up what he had eaten, crude. When therefore he was every day in danger of perishing, I made him an Instrument, like a rod,

Michael Do-
Angius.Petraeus &
Barbette.Sylvius de le
Boë.Willis
Pharm. Rat.
Sect. 1. Cap. 2.

Idem, Cap. 3.

Rhodius.

Erid. Hist.
mannus.

of Whale-bone, with a button of Sponge fastned to the end of it: The Patient presently after he had eaten and drunk, thrust the food down into the *æso-phagus*, having opened the Mouth of the Stomach, which would otherwise have reſtagnated: And he has taken his food every day theſe 16 years by the help of it, and yet uſes the ſame Inſtrument. Undoubtedly in this caſe, the Mouth of the Stomach being alwayes ſhut either by a Tumour, or a Palfy, will admit nothing into the Stomach, unleſs it be forced open with violence.

Willis.

XVIII. In a moſt violent Vomiting, let 3 grains of *Laudanum* and 2 ſcruples and an half of *Pil. coch.* be given. The Vomiting will ſtop, and five hours after the Patient will purge downwards. A pretty large quantity of Purgatives is given, becauſe the Purgative virtue is infringed by the *Laudanum*, which muſt therefore be mixt with diargydiates and colo-cynthiaries.

Riverius, l. 9. c. 7.

XIX. Becauſe Plaſters operate ſlowly, Unguents, or Liniments, or Inunctions muſt be made, upon which we ſtrew powders adding a good quantity of Vinegar. All Inunctions muſt be made in the beginning with hot things, in the end with cold: for all hot and cold things are aſtringent, the warm are laxative: and we muſt anoynt without much rubbing, but only fomenting it lightly; for all agitation or motion about the Mouth of the Stomach provokes to Vomit.

Rondeletius.

XX. Plaſters above any other forms of Topical Medicines, ſhould in this caſe be applied to the Stomach; left by rubbing the Stomach with Oyntments Vomiting be ſometimes cauſed.

Platerus.

XXI. When the Stomach utterly reſuſes Medicines, which muſt of neceſſity be uſed, before you give the Patient any thing, apply ſuch a Plaſter; Take Oyl of Maſtich, Quinces each half an ounce, cruſt of baked Bread, ſteeped 2 hours in ſtrong Vinegar, 2 ounces, *Spodium*, Maſtich, Mint, red Coral prepared, Sanders white and red each 1 drachm, Barly flower, what is ſufficient, to make them up. Dolorifick ligatures of the extreme parts are good; and a dry Cupping-glaſs applied to the bottom of the Stomach.

Cæſo.

XXII. Vomiting is cured by Vomits if the ſtrength be good, which very thing *Hippocrates lib. de Lec.* confirms, becauſe the cauſe of the Vomiting is carried off. So a certain Soldier was taken with a burning Fever, and vomited up whatever he took, to whom on the fifth day, when he aſked my advice, I gave him half a drachm of *Sal Martis* in Beer pretty warm, after which he caſt up a load of vitious Humours, and then he kept well whatever he took. Thus is it confirmed, that Vomiting is cured by a Vomit. Such Symptomatical Vomits often proceed from Humours that irritate the Stomach; yet the Vomits muſt be ſuch as have an Aſtringent, and ſtrengthen the Stomach.

Frid. Hofmannus.

XXIII. According to *Avicenna's* advice, let not them that Vomit, eat, till they be very hungry.

XXIV. In a Symptomack Vomiting the con-junct cauſe is either in the Stomach, which produces this Idiopathick affection, or being fixt in other parts it cauſes Spafms in them, and by communication by the Nerves emetick perturbations in the Stomach: as it happens in Fits of the Stone, Colick, Mother, in the *Vertigo* and other Diſeaſes; the cure of ſuch a Sympathick Vomiting depends on the cure of the primary Diſeaſe. And the emetick matter reſiding in the Stomach, is either poured into it from ſome where elſe, or is bred there through defect or depravation of concoction. In either caſe the preſent load muſt firſt be diſcharged, and then all further product of it muſt be prevented: Therefore that the impure filth of the viſcous matter may be cleared from the Stomach, a gentle vomit may be given with *Carduus poſſet* drink, or *Ozymel* or Wine of Squills, or with a Decoction of Ca-

momil flowers or Agrimony roots, or a Solution of Salt of Vitriol or the like: Then the remainder of the matter muſt be carried off by Clyſters, or Purging with *Pilul. Maſtich. Stomach. cum gum.* or *Tinctura Sacra*, or a gentle Infuſion of Rheubarb. Moreover, ſince the impure or rancid Blood does often afford a new ſtock of incongruous matter, either by the Arteries, or Choledochal Veſſels, and breeds an emetick diſpoſition, Phlebotomy often does good. And therefore the Vomiting of Women with Child is often cured by this means (See *Tit. Pregnant. BOOK XIV.*) Furthermore, thoſe things are proper which temper the Blood, ſo that adult recrements are not bred in them. Therefore drinking of Whey, Medical Waters, Juices of Herbs, *Sal Prunellæ* and the like, in as much as they put the Blood in fuſion, and carry the recrements another way, do often remove this vomitive diſpoſition. Such Medicines will alſo be of uſe, if frequent and dayly vomiting proceed from the meeting and ſtriſe of the biliary Humour and the pancreatick juices, and their regurgitation into the Stomach.

Willis.

XXV. The Vomiting is more frequent and difficult of cure, which proceeds from ſome incongruous matter, bred within the Stomach, in as much, namely, as all that is eaten degenerates into an irritative putrilage, becauſe of the vitiated ferment of this part. Wherefore in this caſe, after the filth of the Stomach is cleaned by gentle evacuators, Medicines vulgarly called Digestives, are of uſe, which according as the fermentative juice of the Stomach is for the moſt part of a ſaline nature, ſometimes of a Sulphureous, and is in a various ſtate of fixity, fluidity, or aduſtion, are various, and ſometimes one, ſometimes another does good. In Belching and an acid Vomit the following Medicines may be tried, and the method may be taken from the *juvantia*. Take of *Pulvis Ari Compoſitus* 1 ounce and an half, Salt of Wormwood 2 drachms, Sugar of Roſes 3 drachms. Make a powder. Give 1 drachm of it morning and at 5 a Clock in the Afternoon in a draught of Beer boyled with Mace and a cruſt of bread, or in diſtilled water or Tincture of Pontick Wormwood. Take of powder of Ivory, Crabs-Eyes, red Coral each 2 drachms, Coral calcined 1 drachm, red Sanders, Cinnamon each half a drachm. Make a powder. The Doſe half a drachm in the ſame manner. Take of the Tincture of Salt of Tartar 1 ounce. The Doſe 1 ſcruple to half a drachm, twice a day, in ſome appropriate diſtilled water. *Idem.*

XXVI. In Vomiting from a ſharp and hot matter Medicines endued with a ſowre and vitriolick Salt are more convenient. That famous one of *Riverius* is proper in this place; Take of Salt of Wormwood 1 ſcruple, give it in a ſpoonful of juice of Lemons. Take of Coral prepared two drachms, Salt of Wormwood one drachm and an half, juice of Lemons four ounces; Let them ſtand in a capacious Glaſs; Add of ſtrong Cinnamon water 2 ounces. The Doſe, a ſpoonful or two twice a day, firſt ſhaking the Glaſs. Take of powder of Ivory, Coral each 2 drachms, Vitriol of Mars 1 drachm, Sugar Candy 1 drachm. Mix them. Divide it into 6 or 8 parts; let 1 be taken twice a day in ſome convenient Vehicle. In this caſe mineral, purging waters which have much Nitre in them, and Iron Waters, uſe to do abundance of good. *Idem.*

XXVII. If when the Stomach perverts moſt it takes, into a bitter and bilious putrilage (as it often does) it be therefore inclined to frequent vomitings, Medicines both Acid, and Bitter, are proper; Take of *Elixir proprietatis* 1 ounce; take 1 ſcruple twice a day in ſome convenient Vehicle; Take of Rheubarb in powder xxv grains, Salt of Wormwood 1 ſcruple, Cinnamon water half an ounce, juice of Lemons 1 ounce. Mix them. Take this either by it ſelf, or in ſome convenient Liquor. Take of powder of Crabs-Eyes half an ounce. Tartar Chalybeate 2 drachms, Sugar Candy 1 drachm. Make

idem.

Make a powder. The Dose half a drachm with some convenient Liquor twice a day.

XXVIII. The cause of a frequent and habitual Vomiting is oftentimes not so much any matter irritating the Stomach, as a weakness of its Nervous fibres, and its too great propensity to irritation; inasmuch namely, as they being very tender and infirm, can neither concoct what is taken, nor bear the burthen or load of it; but are presently irritated by any thing that lies upon them, and therefore put the contrary Fibres into emetick Spasms, that they may throw off what is troublesome. In this Affection there are 2 cases, to wit, Either a weakness of the Stomach, implanted in the very Fibres, is contracted from some inordinate courses, as Surfeiting, daily and immoderate drinking, frequent drinking of Wine or hot Waters, and other Errors in Diet, inasmuch as these Fibres being distended beyond measure, or too much heated, or as it were roasted, cannot admit or contain animal Spirits in a quantity sufficient; Or, Secondly, these Fibres, although of themselves they be well enough, yet because of Nerves somewhere obstructed, they are deprived of a due afflux of Spirits, and thereupon being languid and flaccid, they cannot bear what is taken, but being oppressed, they force it back by Vomit. Thus I have known several, who, without any impurity of Stomach, or *languor* contracted from disorder, have been taken, as it were, with a Palsy in that part, and lost their appetite, and have been subject to frequent Vomiting. In the first case such Remedies are indicated as may by their Stypticity make the too much distended and thin Fibres to corrugate and contract into a narrower room, and such as may by their pleasantness draw spirits more plentifully thither, and refresh what are languid. Take of Conserve of red Roses vitriolate 4 ounces, preserved Myrobalanes 6 drachms, Ginger preserved in India half an ounce, *Species de Hyacintho* 2 drachms, the reddest *Crocus Martis* 1 drachm, Syrup of Corals, what is sufficient, Make an Eleuary. The Dose 1 drachm twice a day, drinking a draught of distilled water upon it. In a weakness of the Stomach or resolution caused by some Nerves being somewhere obstructed, Antiparalytick Remedies joyned with Stomachicks will be of great use. Take of *Elixir proprietatis Paracelsi* 1 drachm. The Dose 1 scruple twice a day in the following water; Take of Cypress tops 6 handfuls, leaves of Clary 4 handfuls, the outer rind of 12 Oranges, Cinnamon, Mace each 1 ounce, roots of *Cyperus*, lesser Galangale each half an ounce. When they are cut and bruised, pour to them of *Brunswick Mum* 8 pounds; distill them in common Vessels. Tincture of Coral, Tartar, or Antimony, may be used in the same manner. In this case *Spiritus Salis dulcis*, also Spirit of Sal Ammoniac or its flowers, give great help. Moreover Vomits and Purges, and Sweats, are often given with benefit. I have known this Disease several times happily cured by Bathing in the Bath at *Bathe*.

XXIX. In Vomiting, and the Disease Cholera, *Laudanum* may be given with Syrup or Tincture of Roses or with *sapa* of Quinces and let a Cupping-Glass be immediately applied to the region of the Stomach, and make a Cataplasim of Leaven, powder of Mint and Orange Peel, with some juice of Mint.

Medicines especially made use of by eminent Physicians.

1. Let this Plaster be applied, for it does wonders; Take of Mastich, Cinnamon, *Lignum Aloes*, Zedoary, Galangale, Cloves, Anniseeds, *Marathrum* each 3 drachms: Mix them: Make a powder. Mix the powder with Oyl of Mastich and Balm: And then with leaves of Wormwood and Mint, and

baked Bread boyled in Wine, make a Plaster, and apply it warm.

2. This following applied, is found to stop Vomiting presently; Take of sower leven 2 drachms, dried Mint powdered, Mastich powdered each 2 drachms and an half, powder of Cloves 1 drachm, a little Vinegar. Mix them, and spread them on a Cloth and apply it warm, it does excellently well.

3. Water cooled in Snow stops a pertinacious bilious Vomiting above all things: As I have found by experience.

4. This is a most excellent Remedy for all Vomiting; Take of Cloves grossly beaten half a drachm, Roses 1 Pugil, red Wine half a Pound. Boyl half away. The Dose 2 Spoonfuls after meat.

5. If enormous Vomiting follow the taking of Antimonial Medicines, take 4 drops of Oyl of Cinnamon in Cinnamon-water, and the Vomiting will presently stop.

6. This is admirable good; Take Yolks of Eggs, fry them in a Frying pan with Oyl of Mastich, adding powder of Mastich and Coral, till they become a soft cake. Apply them hot to the Mouth of the Stomach.

7. I have learned by experience, that Water and Vinegar of Roses with the Yolk of an Egg and a little Salt, without any Butter, presently stops Vomiting.

8. A crust of Bread dipt in Malmsey Wine or Mint water and sprinkled with powder of Mint, Mace, Cloves, Cinnamon, or *Spec. Aromat. rosat.* and applied to the Stomach, is effectual. ¶ In whatever cause Bread toasted, dipt in Vinegar of Roses, and bestrewed with powder of Mint, Cloves and Roses, is good. ¶ This is a certain experiment and reckoned as a secret by some; After the taking of Antimonial Medicines, which vomit too much, to give a spoonful or two of Spirit of Wine, and it gives present help.

9. Dried Coriander infused in Vinegar does admirably in a hot cause.

10. Sower Leven soaked in strong Vinegar and juice of Mint applied and renewed twice or thrice, most certainly stops Vomiting by Purging and due Revulsion.

11. A few Coriander Seeds, in Vomiting after the taking of a violent Medicine, have an admirable property to stop it, if they be chewed.

Vomitus Sanguinis, Puris, or Vomiting of Blood, or Corruption.

The Contents.

Purging is good. I.

It must not be stop in all. II.

Things that are hot and of subtil parts must be put into the Applications. III.

Oily things are hurtful. IV.

Vinegar must not be given alone. V.

Caused by swallowing a Leech. VI.

From the Spleen. VII.

The Cure and Prevention of Vomiting of Pus. VIII.

Medicines.

I. Gentle and frequent Purging must be celebrated, whereby the Blood is purged from those serous and bilious Humours, which produce this Disease. Which kind of Purges, celebrated by a prudent Physician, do wonders, as I have learned by experience. And they must be made of Rheubarb, Myrobalans, Tamarinds, and triphera

○○○○

Perfusa,

Willis,
ibid.

Mayenne,
tract. de
Laudano.
M. S.

Persea, which Medicines purge and bind, and no way disturb the Humours, so that you need not fear any vomiting of Blood will be caused thereby.

Riverius.

II. There were two Women at *Padaa* who the day before their *Menses* came, Vomited Blood; they perceived the Vomit before it came: which if the Physician tried to stop, divers Symptoms would arise, and go away with vomiting.

Rhodius.

III. In Oynments, Epithemes, and other applications, we must take care, that they have some heat with their astringent: for though the flux be stopt with cold and astringent things, yet this is done, upon taking the indication from the function of the part (that is, the Stomach) and from the time: *Cyperus*, Spike, *Cassia*, and Cinnamon, are the best among other Astringents: For besides that they preserve the nature of the part, they help also the penetration of the astringent and cold things, which are of gross parts.

IV. In vomiting of Blood the use of Oyls is suspected, because they open the orifices of the Veins rather than close them: Therefore *Aloysius Mundella* denies Oyl of Sweet Almonds to all that vomit Blood.

Bartholinus.

V. The use also of Vinegar alone is suspected, because it exasperates the parts, and raises a Cough, whereby it promotes a new fluxion. Therefore it must be sweetened with Honey or Sugar.

VI. A Country-Man was ill of Vomiting of Blood, that would give way to no Remedies for several dayes. The Physician being desirous to carry off the Blood, that was gathered in the Stomach, by vomit, prescribed him 2 ounces of Oyl of sweet Almonds, which made him vomit, and he brought up clotted Blood, and a Leech also that moved upon the ground. This was an unknown and rare cause of vomiting of Blood. The Patient said afterward that he drank of a rivulet, where he had swallowed a Leech with the water.

Riverius.

Obs. 26. Cent.

4.

VII. In the year 1662. I saw in the Town *Boudri* within the Territory of *Newenburgh*, a Notary fifty years old, who vomited at one time a pound of clotted black Blood, and, as he said, he had vomited as much the day before. His Stomach was then squeamish, with a sense of a load, wherefore I gave him a little warm Oxycrate (for there was nothing else at hand) which brought up no less quantity. Because the strength was good, I prescribed him a *bolus* of Conserve of Roses with 1 drachm of the powder of Rheubarb, which brought away a great deal of clotted Blood mixt with the Stools. Then I proceeded to strengtheners. For Preservation I ordered him to Bleed at the *Hæmorrhoids* twice a year (for the flux came from his Spleen, as the swelling of it returning at times did testify) giving him Chalybeates and openers of Obstructions. He followed this wholesome advice for 2 years; which being neglected the third year, his vomiting returned with greater violence, which deprived him of Life. I have known many (*Jayes Dodonæus cap. de Absynthio l. hist. stirpium*) who have brought up Blood by vomiting. I remember I saved one or two by my advice after once vomiting, and indeed by the frequent use of Wormwood all manner of ways.

VIII. The excretion of *Pus* by Vomit and Stool must not be stopt, but gently promoted, seeing it is an Humour *toto genere* preternatural, and every way hurtful to Man. But the new growth of it must be hindered, as much as can be, since it is bred of Blood, the fewel of our vital flame, and the food of all the parts of the Body, as well containing as contained. Among all things which move or promote excretion of *Pus* I prefer and commend Antimonial Medicines: for I have often observed that they have not only a virtue of correcting the mischief which comes from *Pus*, but also of hindring the breeding

of new *Pus*: for rightly prepared and administered it serves no less for the purifying of Man's Body, than for purifying of Gold. Also *Balsamus Sulphuris Anisatus*, and any other, stops the continual generation of *Pus* out of corrupt Blood, if 2 or 3 drops be taken several times a day; from which also the cleansing and certain healing of the Ulcer may be expected, and perhaps more certainly than from any other Medicine. To this end also *Antimonium Diaphoreticum* will conduce, and any other altering Medicine made of Antimony, and a Balsame artificially made of its flowers.

Sylvius de le Boc.

Medicines especially made use of by eminent Physicians.

1. To stop vomiting of Blood I gave these with success; Take of Mummy 1 drachm, juice of Horsetail 1 ounce, water of Plantain, Horsetail each 1 ounce and an half. After the Patient had drank this cold, his Bleeding and Vomiting stopt. ¶ To a Woman, who brought up her *Menses* by vomit I gave this Clyster for diversion; Take of Chicken broth wherein a few Prunes, Raisins, and Aniseeds were boyled, *Cassia* for Clysters 1 ounce, oyl Olive, of sweet Almonds, Chamomil each 1 ounce, common salt 1 drachm, *Sal Gem.* half a drachm, the yolk of an Egg. Mix them. Make a Clyster. She recovered beyond expectation with this one Remedy: But every Month, before her vomiting came, she was bled in the Foot.

Forestus.

2. Practitioners use to apply Remedies to the Spleen: as I have observed from experience, when the Patients have vomited great quantities of black Blood, the vomiting has been presently stopt by this Plaster. Take of Barley flower, Acorns, root of Comfrey each 1 ounce and an half, blood-Dock 2 drachms, Plantain water and red Wine each what is sufficient. Mix them. ¶ Pomegranates also are very good to allay the fury in this case.

Gremb.

3. *Trochisci de Carabe*, de *Terra Sigillata* each 1 drachm, Water of Shepherds purse, Purslain, Plantain each one ounce. Mix them. This immediately does good.

Grulingius.

4. An Amulet of a Plate of lead, or a flat pot of lead with Quick-silver in it, if it be hung to the back, is very good in this case.

Kozak.

5. This is certainly true, I remember a certain young Noble-Man, who voided such abundance of pure Blood at his Mouth, sometimes without, sometimes with Coughing, that you would have sworn he would have vomited up his purple Soul. This Person at the time of his Fit held fast in his Hand some Shepherds-purse; and out of his Fit, put some Shepherds-purse to the soles of his Feet, and both his Vomiting and Spitting of Blood stopt: But I recommended to him, as to other Phthical Persons, the fume of the best native Sulphur, which he was ordered to receive with his open Mouth, by which means he was not only cured of his Vomiting of Blood, but he married a Wife.

Simon Pauli.

6. That the Blood may not congeal upon the Stomach, two ounces of Simple Oxymel should be given. But if it be congealed, the best Remedy is 1 ounce of Hares Rennet, with 3 ounces of Vinegar, given in drink.

Rhodius.

7. This applied to the Breast and Stomach quickly suppresses vomiting of Blood; Take of Rye-Bread 3 handfuls, Salt 1 handful, Vinegar what is sufficient. Mix them. Make a Plaster.

Mart. Rudandus.

Urina.

Urinæ Incontinentia, or Incontinence of Urine.

The Contents:

When Blood may be let? I.

The Cure of it, when caused by tearing the Bladder. II.

I. IF the Menfes or Hæmorrhoids be stopt, then indeed if you can easily bring them down, you must bleed in the Foot sparingly, and at times, as much as may suffice to abate the abundance; but if the stopt Blood be crude, as it often is, you must bleed more sparingly, and then Purge, and afterwards proceed to things that strengthen the part. But if it come from a defluxion of fluid Phlegm, which is ever running, or of thick Phlegm, which having gathered there, caused that mischief, we must have a care of letting Blood, unless the Body in like manner abound in Blood.

II. In the year 1608. I was called to a young Woman of her first Child, whose Bladder a foolish Midwife had torn, so that she could not keep her Urine one moment. Whereupon her Skin of the *Labia Pudendi* was first excoriated with the continual running; then there grew so many Warts, but soft ones, as I believe no man's two hands could hold them; both her Buttocks also were almost eaten away with her Urine. I ordered her to be carried to *Liege*, being desirous to cure her. As soon as I fell upon the cure, I anointed thick that ugly great lump of Warts with the *Magma* of crude Antimony and Sublimate, out of which they distil the Butter of Antimony; which being often scraped off, the *Labia Pudoris* did at length on the third day show themselves deep buried, and the putrid eaten flesh of her Buttocks gave some hopes of Cure. As soon as I could part the *Labia*, and observe the Spincter of the Bladder, I fitted a Silver Pipe to it, the shorter end whereof I put into her Bladder, and to the longer, which stood out four inches, I fastned a Pot: The Urine in this manner being carried another way, and the Ulcers cicatrized, she seemed well, and the Nineteenth day after she came to *Liege*, she called her Husband to her, with whom she had not lain for two years, by whom, when I had taught her to put off and on her Silver Pipe, which was necessary in their embraces, she was with Child, and was safely delivered. But after I had used several things in vain for the stopping of that dropping of her Urine, I left her glad of this one thing, that, though she was troubled with the Pot, yet she lived without Pain. Afterwards I met her very well, and she offered me the Silver Pipe again, if I had any occasion for it. I was amazed, how she could be rid of her incontinence of Urine, and she shewed me a Bag hung about her Neck, wherein there was the Powder of a Toad, which had been burnt alive in a new Pot. A *Cingar* had taught her this, and that she would hold her Water as well as before her Bladder was torn.

Urinæ Suppressio, or Stoppage of Urine.

(See *Ischuria* Book IX.)

Uteri Affectus, or Diseases of the Womb.

The Contents.

Vinegar does not alwayes hurt. I.

It delights in sweet things. II.

The Hæmorrhoids must not be opened. III.

It throws off its impurities to the Groin. IV.

Sugar is an Enemy. V.

In an Abscess of the Womb after the Suppression of the Lochia, what Vein must be opened? VI.

What Vein must be opened in its Inflammation? VII.

Whether we may use Vomits? VIII.

When Flesh may be allowed? IX.

An uterine Fungus taken away by Section. X.

Whether there be any such thing as the falling out of the Womb? XI.

A Vomit must not be given. XII.

A Semicupæ must be used with Caution. XIII.

When Astringents are proper? XIV.

One resembling the Sciatica. XV.

What such the Candle or Obturamentum should be? XVI.

In an Inflammation Clysters must frequently be given. XVII.

Sudorifics and Narcoticks are proper in it? XVIII.

The Efficacy of Fomentations and the way of applying them. XIX.

A Caution about Fumes. XX.

The Cure of an abscess upon the *ala Pudendi*. XXI.

The Cure of Warts of the Vulva. XXII.

A huge swelling in the Pudendum taken away. XXIII.

An easie Cure of inflation of the Womb. XXIV.

Narcoticks may be given in a Cancer of the Womb. XXV. Medicines.

I. ALTHOUGH Hippocrates & *Acut.* says, that Vinegar is *ὀξεῖα* (or painful to the Womb) and affirms that Women are more hurt by it than Men, yet he often uses it in their Diseases, which arise from some fault in the Womb: for he used it not only applied outwardly, and gave it by the Mouth, but he also injected it into the Womb in Collutions, and Fomentations made of Vinegar, as is manifest from *Lib. de Morb. Mul.* to wit, because of the remarkable faculties which Vinegar has of cutting, attenuating, drying and cooling, with tenuity of parts, which are not found equal in another Medicine, we are often forced to use it, though it may do some harm; that is, when the benefit which results from its foresaid Virtues, is greater than the inconvenience that comes from its smell. ¶ *Riverius* orders Clysters of Oxycrate in Fits; yea, he gives a glass of it, by which he says the Fit is presently stopt, the vapors which cause it being repressed, and coagulated.

II. There must always be this caution in things of the Womb, the serous Remedies must never be prescribed without sweetness, otherwise they will go to the Kidneys, for the Womb delights in sweet things, as the Kidneys do in serous. For this reason *Galen* mixed not Honey in the cure of *Boethius* his Wife, when he would avert the course of the humors by Diureticks, wherefore we add Orrice to the Honey that it may more greedily be received by the Womb.

O o o o 2

III. In

Martianus
Com. in loc.

Heurnius

Heers,
U. J. 14.

III. In Diseases of the Womb it is clear, that it is not necessary to open the Hemorrhoid veins, because the redundant Blood in this part may be purged by its own Vessels, and much safer: For though these Veins may easily be opened, yet they are not so easily shut again. And if the *Lechia* succeed not, they may be voided by proper Uterines.

Walaeus.

IV. As the Men do discharge their Liver and Spleen to the Groin, so Women do moreover what is redundant in the Womb: And the way whereby this filth runs is reckoned by Anatomists the lower Ligament of the Womb which descends on each side to the inguinal Glands, in which sometimes Venereal Tumors appear. Therefore *Celsus* says well, l. 4. c. 4. *If a Woman, when her Menstrua do not pass, vomit Blood, it is the best way to apply a Cupping-glass to her Groin.* Would you know the reason? you can scarce come to a place nearer the Womb, or more effectually avert the outrageous violence, which the uterine Blood offers to the Parts above the Diaphragm.

Tulpius.

V. A Woman whose *Lechia* stoppt, was bled in the Foot, and had *Platerus* his Powder for forcing the *Lechia*, given her in Bugloss-water; but instead of Sugar, an enemy to the Womb, I put in the *Anthera* of white Lilly flowers.

Bartholinus.

VI. When an Inflammation turns to an Abscess, some letting of Blood must be endeavored: Which indeed, for Revulsion sake, must be let in the upper Veins, except the Patient be lying in, and therefore be in danger of Fits; wherefore it is safer to bleed in the Foot. For formerly I saw my Master let a certain Plethorick young Woman, lying in, Blood in her Arm, whom, when we went to visit her in the Evening, we found dead of Fits.

Fortis.

VII. Whether may a Vein be opened in an Inflammation of the Womb? The Basilick Vein must be opened for revulsion and evacuation of plenitude. For though some open the lower Veins, yet because the opening of them draws the Blood to the Part affected, therefore we must abstain, at least in the beginning, lest from a greater Fluxion to the Part the Disease grow worse. Nor can revulsion be thus made, whatever *Fuchsius* and others think. But when the Fluxion is over, a Vein may be opened below, for evacuation of the conjunct cause. Reason tells us as much; for if in the beginning of an Inflammation revulsion must be made from the Womb, then the upper Veins must be opened. 2. In an Inflammation of the Womb the *menfes* must not be provoked, therefore the lower Veins must not be opened. And though *Galen*, 2 ad *Glauc.* 2. order Bleeding in the Foot, yet it must be understood of derivation; or of Diseases in the Womb wherein there is no need of revulsion. But if there be no plenitude, and the Inflammation be small, it will not be amiss to begin with the *Saphena*. But in a Woman with Child it is always dangerous to bleed in the Foot.

Sennertus.

VIII. *Avicenna* bids us use Vomits, but without doubt it is to make evacuation by a place farthest distant from the part affected. But we must take great care; for if they be gentle, they evacuate almost nothing; if strong, they make a great disturbance in the Body, whence more harm than good follows.

IX. When the Womb is ill of an Erysipelaceous Inflammation, the Diet must be of Ptisan, both the Cichories, Lettuce, with Bread, abstaining from Eggs and Flesh, till they have passed the increase and state. For I cannot commend *Mercatus* and *Mercurialis*, who, when the first 3 days are over, give Flesh, for they do not so soon pass the time of increase and the state, wherefore in the declension we may use them.

Ferdinandus, Hist. 4.

X. Parts full of Glands easily degenerate into fungi, the proximate subject of a *Carcinoma*, and if there be any fungus in the Womb, the fungus irritates it presently, and it pours out the *menstrua* in no less plenty, than if the true Birth were at hand; where-

by, nevertheless, since this fixt tumor is not at all expelled, it is necessary to have recourse to the Knife, and by the help of it to take out by the root, what cannot otherwise be extirpated. But all the Skill is, either to attempt such a Section; or rightly to perform it in such an obscure place. In which notwithstanding I saw it twice performed with as much security, and the fungus of that Part cut out by *Bernardus Ollularius* without any hurt to the Part, as if he had directed his Knife in the open light, and in a place most obvious.

Tulpius, l. 3. c. 33. and 34.

XI. I have this admonition to give concerning the falling out of the Womb, that it is scarce, yea altogether impossible, that the Body of the Womb should hang out of the *Vulva*; and therefore this Disease is not so frequent as is commonly thought. But Midwives, and most Physicians with them, are deceived (which *Roonbushius* confirms in his Observations) by the rugous *vagina uteri*, which after a hard Labour or an unskilful Midwife, being separated from the Parts about it, by the additional afflux of pituitous Humors (which we may often observe to happen in the lower Eye-lid) is so extended and increased, that the *vagina*, hanging without the *Vulva*, resembles some pyriform vessel. For the greater the falling out is, so much narrower the root of it is. And therefore when we are forced to cut it off for a Gangrene, it is done with little danger.

J. Van Horne & Barbette.

XII. Some approve of a Vomit, because it makes revulsion of the Humors to the upper Parts. And upon that account indeed it were good, but that it may be feared on another; because it is performed with great straining, and forces the Womb as much as sneezing: Yea, Experience has shown, that nothing is more effectual to bring away the Child quickly in a hard Labour, than to give a Vomit.

Riverius.

XIII. Physicians use a Semicupe of a Decoction of Astringents: which yet needs caution: for there is danger, lest the Womb in that posture be turned out of its place, especially while the Disease is in the beginning and new: but when it has held the Patient a long time, and she is guarded by a Truss, it may do her good.

Idem.

XIV. But concerning astringent Medicines, as well internal as external, we must observe, that they must be cautiously used, if the *Menstrua* come at certain Periods, lest they should be stoppt, and great mischief should arise from thence. And the time most proper for such Medicines is, when the *Menstrua* are past.

XV. A Woman had not been well Purged after her Travel, and when other People thought she was ill of the *Sciatica*, the Physician commanded the Midwife to search, whether her Womb were not slipped to the Hip, which she found was so: Therefore there was need of Chirurgery. She was set in a hollow Chair, and fetid fumes were placed below, and sweet ones held to her Nose; Afterward the Midwife, having anointed her Finger with Oyl of sweet and bitter Almonds, separated the Womb from the Hip, and placed it right; and then she lay awhile on her well side.

Lucilius Philaleus.

XVI. In curing the falling out of the Womb we must especially have a care, that the wax Candle or *Obturamentum* be not so thick, as by its continual attrition to cause the Whites or Ejaculation of Seed, whereby the Body must of necessity be weakened. But you cannot with all your Prudence either altogether or always prevent this mischief. Wherefore they seem to act with reason, who make a hole lengthways in the Candle, to make a fit passage for the Humors.

Barbette.

XVII. Emollient and Carminative Clysters are proper, if an Inflammation arise in the Womb from the suppression of the *Lechia*, and there be Pain with heat and pulsation; and they must be given now and then: 1. That the Excrements of the Belly may be carried off in time, lest by staying there they encrease

increase the Pain and Inflammation. 2. That the acid acrimony, which is peccant in every Inflammation, may be tempered by the steams of the Clysters, which penetrate the Womb. And 3. That the Parts distended by the Inflammation, and hitherto in Pain, may be asswaged.

Sylvius de le
Boc.

XVIII. To this purpose also Sudorifics of Crabs-eyes, *Antimonium Diaphoreticum* and the like will be proper; because they especially are good, above all things that are yet known, both to prevent and cure an Inflammation, adding always Opiates, which temper every sharp thing, and assuage all Pain.

Rem.

XIX. Fomentations also made of a Decoction of aromatick and emollient Plants are good for this purpose. And they ought to be applied with a great sponge or woollen cloth pretty hot to the bottom of the Belly, and the *Pudendum muliebre*, that their virtue may the sooner and more successfully penetrate into the Womb it self. Such Fomentations also may be applied in an Oxes Bladder half way filled.

Idem.

XX. Fumes made of the Stone *Pyrites*, red hot, quenched in Vinegar are wonderfully commended by *Galen* to dissolve all schirrous Tumors. Yet we must have a care that the Stone *Pyrites* be not a Leaden one; for then it would do a great deal of harm.

Riverius.

XXI. Sometimes upon the *Ala pudendi muliebris* there grows a swelling at first small, then vastly encreasing, soft, all of a colour, which may be handled any way without pain: And from the foresaid signs, and from the matter contained, I place it among the oedematous kind. *Celsus* calls it an Abscess, but I understand it to be a cystick one, or anomalous, and not suppuratory; for section, especially in these lax places need not be deferred for fear of a *Fistula*. A Whore had a Tubercle upon her *labium pudendi* as big as a small Pine nut, hanging by a base, lesser than the other extreme, which of a little thing had grown to that bigness in one year. I tied it hard with a string for one day, and the next day I cut it off almost stupefied, covered with a very thick skin, almost half an inch thick. It was cured as an Ulcer in 30 days.

Severinus.

XXII. *Philomenus* in *Ætius lib. 4. f. 4. c. 108.* held a stalk of wild Marjoram lighted at a Candle, to take away the Warts from his Wife's *Vulva*; yet not so as to burn them, but that they might receive the smoak.

XXIII. In the year 1629. *P. de Marchettis* cut a scirrhous swelling, arising from Phlegm, from a Whore, as big as a Gourd, which grew to the upper part of the *Os pubis*, and covered her whole Privy, full of Malignant Pusules, ulcerated at the root. He stopt the Blood by Canteries, applying Bole Armenick, Dragon's Blood, and the white of an Egg in Cotton.

Rhodius.

XXIV. Inflation of the Womb is best known by the Signs proposed by *Fernelius*. And when it is known, this experiment is excellent. Take a whole Nutmeg, not faulty, cut it into quarters, lay one of them upon coals, and let the Woman stradling receive the same by a Funnel into her Womb. For so, if not at the first time, certainly at the third or fourth, the Wind will burst out with a noise. In this manner I cured a young Woman at *Biel*, when all other Remedies had been tried in vain.

Hartmannus.

XXV. In a Cancer of the Womb if common Anodynes be not sufficient to assuage the most cruel pain, which sometimes will give no rest or sleep, we are often forced to have recourse to Narcotics, which in this Disease, because of the great heat of the Humours, are not so hurtful. I knew a Woman who had a Cancer in her Breast, who every Night for 4 Months took 2 or 3 grains of *Laudanum*, without any harm, to her great comfort.

Riverius.

Medicines especially made use of by eminent Physicians.

For a Cancer in the Womb.

1. A Cancer is cured by a stuck Frog, which they call *Glew* of the Water: They tie a Frog to a staff and expose it to the rayes of the Moon, that so it may be reduced to its first matter, in form like a Frog but looking like dissolved *Tragacanth*.

Gremb.

2. Oyl of Eggs much rubbed in a leaden Mortar, till it grow thick is very good for a Cancer, that is not ulcerous.

Mercat.

3. Take of Cows dung 4 pounds, herb *Robert*, Plantain, Housleek, Henbane, Purslain, Lettuce, Endive each 1 handful, River Crabs N^o 12, Mix them all together. Defil them in a leaden Alembick, and make a frequent injection into the Womb.

Parac.

4. In a Cancer of the Womb this is commended; Take of the Powder of Emerald, Sapphire and Bezoar stone each alike æqual parts. For 3 days let 3 or 4 grains be given in a little scabious, or *Cardus Benedictus* water.

Sennertus.

For a Pain in the Womb.

1. Powder of Harts-horn given in warm wine is very good for a pain in the Womb.

De Bry.

2. Nothing is better, when it comes from cold, than to take 2 scruples of Castor in Rhenish wine.

Forestus.

3. For a pain in the Womb let 4 ounces of oyl of Sweet Almonds and 2 ounces of Sugar be drunk. It eases a woman of her Gripes. ¶ A certain Woman applied fresh Horsemint heated and be-sprinkled with hot wine to the pained place, and the sick party grew well.

Gabelchovrus.

4. Lily root boyled in Oyl of Roses is very good for pains in the Womb, as I have often experienced. ¶ This powder presently takes away the pricking pain, which follows child-bearing; Take of the seed of *Ammi*, Parly, Ginger, Caraway, Long Pepper each alike quantity, Sugar, what is sufficient. Mix them. Make a Powder. The dose 1 spoonfull in Wine.

Varignans.

For a *Fistula* in the Womb.

Take of Oyl of Roses, Honey of Roses, Wax each 1 ounce, Myrrhe, Litharge of Silver each 2 ounces. Make an Unguent. ¶ This is an admirable and certain experiment, especially if the disease arise from driness, to fill some linnen bags with Barly, to boyl them in water, and to hold them warm, with ones hands, and apply them to the fissures for 9 dayes, or some Pap of flower and milk boyled together.

Rod. à Castro.

For a Grangrene in the Womb.

This Emplaster *de tribus farinis* is highly commended in this case; Take of the flower of bitter Vetch, Beans, first steeped in Vinegar and dried, each 2 ounces. when they are powdered, add to them of *Oxymel* 1 pound. Let them boyl gently to the consistency of pap. And if there be great putrefaction, add as much flower of lupines, of Salt 1 ounce, aloes, Mastiche, Myrrhe each one ounce and an half, root of round Birthwort powdered 1 ounce, *aqua vite* 3 ounces. Mix them. It wonderfully hinders corruption, putting always a little sublimate between the sound part and the corrupt: for this is of great use.

Weikardus.

For

For an Ulcer in the Womb.

1. In a foul Ulcer this is a good Remedy, which is made of Eggs, Saffron, Oyl of Roses, Goose-grease and the marrow of a stag. Foreftus.
2. Emplastrum *Egyptiacum* without the *Erugo* is very good against the Ulceration. Ægineta.
3. A fume made of such a Candle as this, and let into the Womb by a Pipe, to dry the Ulcer, succeeded well; Take of liquid *Storax*, *Calaminth*, Orrice each half an ounce, *Cinnabar* 1 ounce and an half, *Ladanum* 2 ounces, Coals of Willow 1 pound. Mix them. Make a powder, and with *Aqua Vitæ* make candles as long as ones finger, one of which will last an hour, sending out a fume continually. Saxonia.
4. For a Fœtid Ulcer of the Womb I have had certain experience of this Medicine; Take of red wine 1 pound, *unguentum Egyptiacum* 2 ounces, let them boyl a little, so the putrefaction is corrected, and the stinking smell of the Ulcer is taken away. ¶ This is a singular Unguent; Take of burnt Lead washed, prepared Tutty, Frankincense each half an ounce, powder them very fine; Then take Oyl of Roses, white Wax each 1 ounce, add of juice of Nightshade 1 ounce. Mix them with a leaden Pestil. Make an Unguent. Vigierius.

Vulnera, or Wounds.

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- Medicines.

I. I Was called to the cure of a Maid who had received a wound with a great knife in her Arm; which being sooner closed with some Balsame, than was necessary, her Arm swelled wonderfully, and grew so red and inflamed, that it always smoaked, and presently dried wet clothes, when they were applied to it: Yet it was cured, after the wound was opened again, because the extravasated Blood had not been taken out, and then it was cured as common Wounds. P. Borellus, Cent. 3. Obs. 25.

II. Although Balsame be a most commendable Medicine and approved of in wounds, yet it cannot safely be applied to all wounds, and at all times. It is good in the simplest wounds and where no Symptome, as pain, fluxion, &c. concurs; for seeing it is a hot Medicine, it might cause many Symptomes: It is good also, where nothing extraneous sticks in the wound; for because it is the faculty of Balsames to contract the Lips of the wound, and to hasten consolidation, when any extraneous thing remains, presently grievous Symptomes arise. In fleshy parts therefore, cleansing must be expected, as also in contused wounds digestion, suppuration and cleansing. Therefore Balsame is neither good in the beginning nor in the entcrease, except the wound be simple and in a fleshy part. Hildanus;

III. Among Empirical Medicines found out by the Moderns, especially by the Germans, *Emplastrum Stipticum* or *Fodicationum* is not in the meanest place, than which some affirm there is nothing better extant in *rerum natura*, especially *Crollius*. That it, as also *Sticticum Paracelsi*, is most excellent, I do not question: Only I say this, besides other mischiefs it often causes a sharp *Ichor* and a *Meliceria*; not that the Plaster of it self is the cause, but because it is applied without reason: For when Surgeons use it from the very beginning in wounds of the Nervous parts to the end of the cure, they raise most grievous Symptomes. ¶ One received a wound in his Arm, where the axillary Vein and some Nerves were cut. He fell into the hands of an Empirick, who boasted, he would happily cure the wound with this Plaster only: It was quickly cicatrized indeed, but his Arm presently swelled and grew painful, and at length a Fever arose, then there was a new fluxion and Inflammation, and pus gathered within the wound and putrefied: And then it corroded and opened a Vein, which bled so much, that the wounded man died. ¶ A young man in a quarrel received a wound on the right side of his Back bone about the fourth vertebra: A barber-Surgeon would cure it with *Emplastrum Sticticum*, but quickly of a very broad wound it became a narrow *fistula* deep and exceeding painful. Idem.

IV. Some admit of vulnerary Potions, only in those wounded parts, to which they can reach, as in the Gullet, Stomach, Guts, where, in a manner, they serve instead of Applications; but in external parts they reject them. First, because there is no mention of them in the Writings of the Ancients. Secondly, because of their distance, they can never come to the Limbs and Head. Thirdly, because, among the Medicines whereof they are made, there are both hot and opening things, as Betony, Speedwell, *Carduus Benedictus* &c. and astringent things, as Comfrey, Wintergreen, Horsetail, Tormentil, &c. so that it is not evident, of what faculty they ought to consist. Fourthly, because most of them are astringent, they will do more harm by obstructing the Bowels, than they can do good. Indeed it must not be denied, that little mention is made of these Medicines among the ancient Physicians; but this is not sufficient to reject them, for the Moderns have found out many usefull Medicines which were unknown to the Ancients. And though they do not touch the wound, as topical medicines do, yet they may reach to the wound by the Veins. Neither, because of the astringent virtue, that some

of them have, need we fear, that therefore we cannot reach to the out parts, or that they will breed obstructions in the inwards; for this inconvenience may be avoided by the mixture of other things with them, which have an opening vertue. Nor then, are the vertues of all Medicines to be esteemed from the first qualities or those that depend upon them, but from their specifick qualities, which Experience alone suggests. "These Potions, says

"*Paræus lib. 18. c. 28.* though they do not purge "noxious Humours by stool, yet they are very effectual in cleansing of Ulcers, and preserving them from the filth of excrementitious Humours, in purifying the Blood, and in cleansing it from all *Ichores* and impurities, in knitting broken bones and restoring the Nerves to unity. And by and by. "These Medicines by their admirable and almost Divine vertue so purge the Blood that by it, as by a fit and laudable matter, flesh, or any other substance, that is lost, may readily be restored, and the part recover its pristine unity. And the thing that these Medicines do, is, to waite the exceeding moisture of the Blood which is not so fit for glutination; to afford good matter, for the generation of flesh; and by moderate astringency, to hinder any fluxion to the wounded part.

V. But although such Potions do wonders; yet great Symptoms, and especially Dropicks of the Limbs, do follow the unseasonable use of a traumatick decoction. For since from some plants it has a great vertue of drying, binding, and agglutinating; and from others, and from the wine, which is its vehicle, of heating; It is evident, that it is then improper, when we should attend suppuration and digestion, which is thereby hindered and kept back, moreover the Blood and Humours are heated, and pains and Inflammations arise. But when the wound is digested and suppurated sufficiently, and free from all Symptoms, when there is place for absterfion, mundification and consolidation, then they become a good Medicine. It must also be observed, that because they greatly bind and dry, they are very bad for such as are ill of obstructions of the Bowels; for by the same vertue they retain the excrementitious Humours in the Bowels, hence Gripes, hypochondriack winds, and a thousand other inconveniences arise: Wherefore the Body must be prepared before the use of them.

VI. *Cæsar Magatus l. 1. de vulner. c. 38.* and *Septalius* following him *l. 8. Animad. Med.* disapprove of the old way of curing wounds, used hitherto by all Physicians and Surgeons who every day, at least once, do cleanse and wipe them, and when they have applied new Medicines, bind them up again: And they blame *Galen*, that passing by the indication of most moment, he was only intent upon the lesser, that is, absterfion of the excrements and filth, the cause that breeds them being neglected, and all care of conserving the temperament and innate heat of the part: Which, and the strength of the part, if they be taken care of, they think there will be a far less increase of excrements. And they think the heat of it will be cherished, and strength will be added to it, if it be hindered from expiring, and its quality be preserved. Which they think they are able to obtain, by making up the defect of a natural covering with a Medicine analogous and familiar to the temper of the part; by means whereof the heat may be cherished, and its quality may be helped by its like. Whence they gather, that for to defend this heat, wounds must be seldom opened, lest the ambient Air do hurt them. But, since the same Persons confess, that most grievous wounds have been cured by the old way of cure, and they cannot deny, but this new one has only place in simple wounds, and where the wounded party is of a good habit of Body, where great Vessels are not hurt, and the Nerves are whole: Besides, there

are many wounds, by their own confession, which Nature is not able to cure, unless the impediments be removed by a Surgeon, as if the Body be *Cachymick*, whence comes great store of excrements, which cause Pain, Corruption of the Part, Inflammation, Worms, proud flesh and the like: Finally, since the exceptions exceed the rule, which very rarely allow the use of this new way, we must insist upon the old one, approved for many ages.

VII. Some reject the use of Tents in wounds.

1. Because they need not be used to keep open the orifice of the wound, when it is always open, whether the Physician will or no; nor to make the Medicines stick to the sides of the wound, seeing they may be so melted, as conveniently to be dropt in. 2. They are troublesome to the part, therefore Nature alwayes endeavours to expell them. 3. They cause pains, whence come new fluxions. 4. When they are full with bad Humours, they hurt the wounded part: And they hinder evacuation of the Pus, which being kept in, grows worse. 5. *Hippocrates* and *Galen* are silent concerning them. On the contrary they seem necessary.

1. That the orifice of the Wound may be kept open, and that there may be a passage for the Pus. 2. That the Medicines may touch the wound every way, and reach to the bottom. 3. That the upper part may be hindered from closing before the bottom of the wound be filled. For a decision, we must know, that in wounds, which are superficial, freight, and that breed little pus, they are not necessary, nor should the cure of the wound be retarded by putting them in: But if the wound be deep, oblique, and if much pus be bred, they are altogether necessary, that a passage may be kept open by them for the pus, and a way for Medicines to the inside of the wound, and that the orifice of the wound may not close and heal up, before the inner and lowest part of it; which things if they be neglected, and pus and excrements be kept in the wound, they may be the cause of great pains and dangers. To the reasons, that deny them, you may reply. 1. That oftentimes wounds, according to the various posture of the Patient, when he was wounded, are anfractuons and oblique, so that though the sides and lips of the wounds be not then grown together, yet they so touch and press one upon another, that there is no passage for the pus. And for the same reason Medicines cannot reach to the bottom. And fluid Medicines are not alwayes proper, seeing they are easily washed off by the *Sanies*, and the thick and viscid, being laid on the tents, stick longer and faster to the wounded parts, and better exert their vertue. To the 2 and 3. If the tents be not over thick, nor press and distend the part, there will be no trouble or pain or fear of fluxion. Again, if all things should be omitted that create pain, by the same rule sutures and swathes, and bandages should be omitted. To the 4. When they are fouled with pus, take them out and put in new. To the 5. The use of them may be gathered from what *Galen* delivers concerning the cure of wounds. And as for them, who hold that the upper orifice of the wound is never closed before the lower part be healed, They may be opposed by experience. *Hildanus cent. 3. obs. 7.* recites two examples of wounds, whose orifices were quickly healed, the wound within being not yet healed, whereupon pus gathered within, and grievous evils arose from thence. ¶ In all wounds, especially those made by incision, the skin is easily and quickly contracted at the beginning. 1. Because it is Membranous. 2. Because Nature endeavours by the tegument of an ignoble part to defend the more noble Parts underneath from the injury of the Air. But flesh cannot so quickly heal up: for in the very wounds made by incision there

Sennertus.

Sennertus.

there is a sort of contusion, but bruised flesh must of necessity putrefie and turn to *pus*, which cannot be done but in time. Therefore the skin of wounds, especially of such as are made by incision is contracted at the very first, and the Humours, which run out of the wounded part, are retained, grow hot and sharp, and hence comes an efflux of Humours, causing grievous Symptomes. ¶ In curing wounds made by a prick we must make great account of Tents, and we must observe what *Hildanus* sayes, that they must not be so thick as to fill the whole wound, but it is sufficient that they fill about 3 parts of it towards the *superficies*, the 4th remaining empty, that the Lips be not extended. The depth also of the wound must be searched, and care must be taken that the end of the tent do not touch or bear upon the bottom, especially if a Nerve or any Nervous part be laid bare. Therefore they must be made of the finest lint in form of a Pyramid, that they may only fill about the 4th part near the bottom, lest the breeding of flesh be hindered: For this cause, when the wound is digested, the tents must be shortned a little every day. Tents are also made like a reed hollow through, either so made with Plasters, or with an Iron plate tinned over, that the running out of *pus* may not be hindered, even when the wound is not unbound. ¶ And very narrow wounds, because they do not receive a large Tent; and being small, because it is flexible, it cannot reach to the bottom; therefore they take a piece of Gold or Silver wire of a length according to the depth of the wound, and wrap it in lint anointed with some Anodyne, digestive oyntment, and put it into the wound.

VIII. Although Tents be of use, yet they are not alwayes necessary, yea sometimes hurtful. A Villain had given a young Woman six wounds, by pricking rather than cutting, in which this was peculiarly observed, that she could not bear Tents, when they were put in according to custome: Which it was necessary to take out at Night, unless you would have wholly kept her from sleep, whereinto she fell as soon as they were taken out, and linnen clothes dipt in Spirit of Wine were only applied outwardly, by benefit whereof before the twelfth day her wounds were both happily filled up with Flesh, and firmly covered with skin. Hence I took occasion to admire the folly and madness of some Men, who, that they may not be thought to do nothing, fill green wounds with great store of Tents, and so they do not heal them, yea, the mutual contact being thus hindered they hinder the necessary coalition.

IX. I have seen no ordinary Surgeons, who have set themselves a certain time and number of dayes, to finish digestion: when which time has been over, they have gone to mundifiers and abstersives, though the wound were not sufficiently digested and suppured, to the great inconvenience of their Patients: For digestion is not equally perfected in all subjects, but in some sooner, in others later. If therefore such things be made use of before their time, they will irritate the wound with their acrimony, they will raise a new afflux of Humours, and so will disturb nature, that of a simple wound it will become a cacoethick Ulcer. Therefore I happily proceed with digestives, and asswagers of pain, for the most part to the end of the cure: By this means, not omitting Universals, I am secure from all Symptomes.

X. *Celsus*, when a wound is inflicted, uses no repellents or repressers, to hinder Inflammation, which Surgeons now adayes commonly use about the place that is hurt: but he cures it only by taking away Blood, averting the fluxion, and also by purging. Which at this day is done with good success by the most learned Surgeons, Repellents being utterly repulsed, lest the Heat of the hurt

part, which is Nature's (who is the Curer of Diseases) chief instrument, should be weakened.

XI. I have seen wounded Men after plentiful Bleeding, cured in a few dayes, without fear of Convulsion. I saw a certain Surgeon in the Camp, curing a young Man, who was wounded in his Shoulder, to whose wound his Friends had immediately applied Linnen Clothes to stop the Blood, and he removed the Clothes immediately, while he was feeling, for I know not what with his Finger in the wound, in the mean time disappointing his Friends, who complained of the large effusion of Blood, he let the Blood run as much as the Patient could bear, without fainting, well knowing, that thereby he rendered him safe from Convulsion, and about 8 dayes afterwards I saw him walking about a Room. I would have the Masters of Wounds to know this, that they may take away Blood, if it cannot be had conveniently from the wound.

XII. If the bleeding of wounds do not stop with Medicines, some use Causticks, and thereby close up the orifices of the Vessels; but this is no safe way. Because how much of the part is burnt into a Scab, so much natural flesh goes off the Part in a Scab, and then the orifice of the Vessels is left open again and destitute of Flesh, and often a new Hæmorrhagy, which cannot easily be stoppt, is raised. Of these Medicines they may the safest be used, which being burnt have got a Caustick virtue, and not burnt have a very astringent one, but little burning: such a Medicine is crude Vitriol, which some strew crude in powder on wounds, others dissolve it in water, and wet Linnen Clothes in it, and apply them to the wound: And Vitriol especially either in powder, or dissolved in some convenient liquor, is good in wounds, when the orifice of a Vessel can be stoppt neither by compression with the Finger, nor with the fufs-ball, called *crepitus Lupi*: and vitriol, dissolved especially in Liquor, does penetrate the hurt Vessel. But we must have a care that the Nerves, if any be there, be not hurt: therefore in deep wounds, if there be Nerves, other things of the like virtue, must rather be injected.

XIII. Some are against Purging in Wounds, and they fear lest the Humours, being disturbed thereby, should flow more to the wounded part. But *Hippocrates* l. de affect. de fract. c. 48, and *Galen* 4. Meth. 4. and 6. approve of it. And Reason perswades it; for if hot, thin, and bilious Humours abound in the Body, they fit the Blood for motion, they easily grow hot with pain and waking, and give occasion to a Fever; and such Humours especially must be Purged, and it must be done at the beginning before a fluxion of Humours, and the coming on of the Fever. But if the Fever be come, you cannot conveniently, or certainly not without danger, give a Purge. And we must abstain from hot Purgers, lest a flux of Humours be raised, and they should dispose the part to Inflammation. *Manna*, Syrup of Roses, &c. are sufficient.

XIV. For making a Cicatrice, dry Powders are used without any preceding humidity, both because we would dry, and because the Powder sticks well enough to the parts; for the parts that are not covered with skin, are ever moist, and that Moisture retains the powder, that is strewed on it, well enough. And such Powders (which are truly and properly Epulotick) are made of things, that bind, close and condensate the flesh, and harden and dry it like a *callus*, such are the Bark of Frankincense tree, rind of Pomegranate, Galls, burnt Oyster-shells, and burnt Coral. Also Myrrh, Litharge, *Diphryges*, burnt Paper, burnt Alum, Vitriol and other things which wait and eat the flesh, if they be powdered exactly fine, and be only laid on the part affected with a gentle touch of the end of a Probe, for if one should use them in a greater

Hildanus.

Hæserus.
Hære. Med.
l. 5. c. 6.

Hildanus.

Tulpius,
l. 4. Obs. 22.

Hildanus.

Rubeus in
Celsum.
p. 290.Alex. Bened.
dictus.

Sennertus.

Sennertus.

greater quantity or courser, they would bite, and waste the flesh, and hollow the Ulcer: And here we must observe, that *as ustum, squamma aris*, and *flos aris* must be waish, to cause a cicatrice, that they may lose some of their caustick faculty, and may be a more Epulotick Medicine: And you may use such Medicines in dry bodies, and parts that are not very sensible.

Rondeletius.

XV. Sowing must not be used, before the wound be well cleaned within, as *Celsus l. 5. c. 26.* sayes, namely, that no concrete Blood may be left there, for that would turn to *Pus*, cause Inflammation and hinder the closings of the wound. I say it is not so well to sow up the wound presently as soon as they look on it, as most Surgeons commonly do. But this inconvenience of grumous Blood happens most in venous places, and not so much in others. 2. But that the wound, when it is sowed up, may discharge its necessary *sanies* dayly, many put in a tent above and below; a thing which is contrary to sowing, and is inconvenient to beauty. 3. We must lay a small thread made of clean Cotton dipt in Honey of Roses, or in some other vulnerary liquor, half way in all along the wound, then we must pass a needle and a thread through the Skin, over this, and make a knot, and so do as often as there is need of any more Suture.

Severinus.

XVI. A Boy was cut for the Stone, and the wound could not be healed; for the edges of it were a callous stone, the Urine being voided that way. Therefore the crusty Lips were made bloody again by the industry of another Surgeon, and when the stony edges were cut off, it afterwards closed up well; and the Urine came by the proper passage.

Keremmannus
de Calculo,
c. 11.

XVII. Sometimes it chances, that a Wound is reduplicate: Now I call it a reduplication of the Wound, when there is only one Wound in the Skin, and two in the Muscles, or which I remember I have seen, three. This reduplication happens, either because of the tremulous hand that inflicts the wound, or because of the motion and agitation of the Wounded person: Such wounds are dangerous, if the Surgeon be either ignorant or negligent. A Fencing-Master going to part two Noble Men, who were quarrelling, was run with a sharp Sword into the left Arm: When the bleeding was stopt, at the perswasion of his friends he only used a Traumatick Decodion. At first the cure succeeded as well as he could wish: But about the third day an Inflammation arose, violent pain, a Fever, reaching to Vomit, &c. Wherefore, when I was called to his assistance, I found all his Hand and Arm swelled, the muscles also of his breast Sympathizing: Having put in my probe, I found a wound a span long reaching towards his elbow, and treated it according to Art. But after several dayes, when the Symptomes did not abate, I reckoned, there must something more there than yet I knew, be in it; therefore I search the wound again with a silver probe, and I find a *Sinus* (but not of the same depth) reaching from under the cephalick vein toward the Median. In the *Superficies* therefore there was only one wound, but in the Muscles there were two. Therefore when I had discovered this wound, I put a tent into it anoynted with a proper unguent, I anointed the Arm, &c. and I happily finished the cure with Sarcoticks and Epuloticks.

Hildanus.

XVIII. A lusty Man of Seventy had received a contused wound with a Club, on the upper part of his Shoulder, with bitter pain, and lividness of the Part. A Vein was immediately opened and *Emplastrum de Camino* applied, the next day he took a gentle Purge: The pain persevering, the part was frequently anointed with oyl of Wax warm, applying the foresaid Plaster upon it, and so with-

in Twenty four hours his pain was gone, and the part came to its colour.

Riverius,
Cent. 3,
Obs. 19.

XIX. If the Wounds in the neck be made by a Thrust, and do not cause present death, this is a sign the jugular Veins and Carotid Arteries are not hurt, therefore we must take great care, that we hurt them not. For though they do not go all over the neck, yet a long and thick Tent must not be put in, but a very short one, which may go no deeper than the Skin, which at the beginning must be dipt in the white of an Egg, applying a double linnen cloath all over the neck, spread with the white of an Egg, bole Armenick and dragon's Blood; then take away a little Blood, and give a gentle Purge the next day, after which for 2 dayes the Remedies applied to the wounded part must not be changed, because most usually the linnen cloth will serve, spread every day with the white of an Egg and the aforesaid powders. The Diet must be only Barly Ptsan twice a day: His Drink, Barly-Water in a small quantity. But if afterwards there be any fear of Inflammation, you may bleed in the other Arm in a due quantity: And if Pain be violent, and the strength will permit, Cupping with scarifying must be used. For the breeding of *Pus* must be hindered with all our Power and Skill, as it corrodes the Veins and Arteries with imminent danger of death, as I have observed in some, that have been ill treated by unskilfull hands, while they thrust very long Tents, whereby much *Pus* was gathered, which consumed the Veins and Arteries, and was the cause of Death, so that therefore after 2 or 3 days I remove that short Tent, and then spread the Linnen cloth with Plaster of Ceruss, repeating another in the like manner doubled the same way and spread with the white of an Egg and the foresaid Powders, with which in the space of 10 dayes at most I use to cure these wounds; Yet always observing a very thin Diet, lest the Humours flow to the wounded part, and being converted into purulent Matter, do erode the Vessels. But if the Wound go quite through the Neck, I use the same Method, that is, I put a very short Tent on either side, in the same manner, as I described before. You must remember also, that you must never search these Wounds with a probe, lest, as it may easily happen, you break a Vein or Artery, to the hazard of life. By which Method I have cured many; moreover I Marchetti have seen many dy, who have been treated in a Method different from mine.

Marchetti,
Obs. 37.

XX. *Felix Wertius* in Wounds of the fingers and hands disapproves of Tents without distinction. How erroneous and dangerous this opinion is, I will declare by the following example. A Merchant of *Colten* struck the needle of the ballance into his hand, he presently went to no Surgeon, nor kept he the wound open with a Tent. The *Superficies* of the wound therefore being closed, the pain encreased about the fourth day, then came a flux of Humours, a Fever and an Inflammation, so that his hand was exulcerated in several places, and was not without a great deal of difficulty cured. ¶ *D. N.* prickt the Palm of his hand with a penknife, and no tents being put in, by reason of the narrowness of the wound, such Symptomes followed, that he was in danger of his life. ¶ A Country fellow prickt the top of his fore-finger with a thorn, the *Superficies* of the wound quickly healed; but *Pus* gathered about the nervous parts, hence came Pain, Inflammation, and a Gangrene, when his finger was cut off at the root he was well. ¶ A Country-man run a Thorn into his Ankle, and the Prick being too soon closed, there followed Pain, Inflammation, Gangrene, and a *Sphacelus* of the whole Leg, which, when he refused to let it be cut off, he died in a few dayes.

Hildanus,
Cent. 4,
Obs. 74.

XXI. In all wounds of the Breast or lower belly, we must altogether abstain from injections with a
P P P P Syringe

Idem.

Syringe for something might get into the hollow, and there raise grievous Symptomes, to the hazard of the Patient: ¶ Yet *Scultetus* used them successfully in wounds of the Breast, as appears from *Obs.* 50. both for stopping of Blood, and strengthening the thorack Parts.

XXII. A certain Liquor runs out of the wounds of the Joynts either ill treated, or ill-conditioned of themselves, which *Celsus* calls *Ichor* and *Meliceria*, which renders the Cure very difficult: And it proceeds from the superfluous Nutriment, which Nature has destined to the Bones: This therefore must be strongly dried up, lest it cause Putrefaction in the Parts adjoining, and caries and holes in the Bones. *Fabricius Hildanus* will have it, that a Flux of this water never appears, except the Surgeon or the Patient have erred. Therefore it cannot be thought, that it always proceeds from superfluous Aliment, as such, or left to it self, but from a corrosive, ferous, ichorous humor, into which even the Nutriment turns, when consolidation is hindered, but not therefore, because that runs out which should stay within, that is, the Aliment, but because that preterfluent water corrodes and exulcerates the circumjacent Parts, and the clammy humor, which is naturally in the Joynts. When therefore we find such an humor in wounds of the Joynts, we must endeavour to avert it by all means, by Purging the Body, opening a Vein, and regulating the Diet; which most Surgeons neglect.

Hildanus.

Paræus, l. 24. c. 19.

XXIII. A Surgeon of Orleans told me not long since that he cured an Apparitor of a wound in his Ham, by which the Tendons, that bended the Ham, were quite cut in sunder: And he went about the Cure in this manner, He ordered his Patient to bend his Knee, then he sowed the ends of the cut Tendons one to another, and then he kept the Limb in that posture, and treated it with that Skill, that at length the wound was brought to a Cicatrice, the Patient not halting at all. A fact truly memorable, and carefully to be imitated by a young Surgeon.

Hildanus.

XXIV. Between the two *Lamine* of the *Calvaria*, above the Eyes, there is a Cavity in some very small, in others large: Wounds that reach to these Cavities are difficultly cured, and often turn to *Fistulae* and *cacoëthick Ulcers*; for a Matter is gathered in them (unless the Surgeon be careful and skilful), which, if it contract Putrefaction, corrupts the Bones and Cartilages. The wounds of these Cavities have so near affinity with the Eyes, that I have seen the purulent Matter, which falls from the wound to these Cavities, and there putrefies, acquires acrimony, lodge in the *Membrana adnata*, and turn the Eyes out of their Orbits.

(See Wounds of the Head, BOOK III.)

Amatus Lusitanus, Cent. 2. Cap. 25.

XXV. A Soldier had a Ponyard struck into his Shoulder near his Collar-Bone. The Surgeon, when he drew out the Ponyard, and observed concrete Blood, and considered that the wound had reached the Cavity of the Breast, he pitched upon Incision between the third and fourth Rib, and learnedly indeed: for Blood very much concrete was contained in the Cavity of the Breast, which by making a new Incision in the Breast was got out thereby, and the Patient was cured in 40 days.

XXVI. We know, and Experience also testifies, that Blood and *Savies* run from the wounds of the Abdomen into the Cavity of it, and often fall into the Groin, wherefore we use to rub the Groin, and apply Plasters to it, that the Matter gathered there may be dissolved, discussed, and so be insensibly evacuated. For one wounded in his left *Hypochondrium* was cured by a Barber-Surgeon, internally only, no outward things being applied, but in the beginning. The Wound indeed healed, but Matter gathered in his left Groin. The Shaver neglects

this, and sends the wounded man away, as if he had been perfectly cured. But after he had undergone a great deal of trouble, the wound opened of it self, and it run variety of Matter: which being healed, greater store of Matter was again gathered about the Groin, and swelling, pain and tension was caused there, with difficulty of Breathing, straitness of Breast, and sometimes a small Swooning. I give a Decoction of the Wood and vulnerary Herbs, and then I apply emollient, dissolving and discutient Oyls and Plasters, by the diligent use whereof, he was at length restored to perfect health.

Ph. Salmuth, Cent. 3. Obs. 84.

XXVII. A Tailor gave his Wife a wound with a Knife in the right *Hypochondrium* above the *Oleum*, in the Night. The wound was bound up; in the Morning, when the Surgeon took off the Plaster, her ordure followed; the wound being dilated, the Gut *Ileum* appeared hurt. I had a mind to make trial in a desperate case, I order the Gut to be carefully sowed to the Skin, and a slice of fresh fat Pork being put between, so as there might be passage for the Excrements, I order the Skin to be closed, I prescribe vulnerary Potions, by which she was cured to a Miracle, and within a few years she was brought to bed of two Children.

D. Maiguanquez, mif. cu. ann. 72. Obs. 176.

XXVIII. I know, many think the coalescence of fibres is fabulous, who yet are either ignorant of Surgery, or have never made trial of a thing which it is not difficult to do. *Gab. Ferrara Observ. Chirurg. l. 1. cap. 17.* shews the way how to sow great Nerves (perhaps he means Tendons) Mr. *Galthier* Surgeon to the Count *de Rabatta*, General of the Imperial Army, 1667. told me that two Persons had the Tendons which bend the wrist, and one of those which bend the Leg, cut in sunder, who, when the Tendons were artificially sowed, did recover their perfect Motion, and the way may be easily learned in Dogs. Not long since some Students in Surgery in this place tried it, they took a Dog, and cut the great Tendon asunder, which moved his left Leg, they took hold of it with a pair of Pincers, and in the Method delivered by *Ferrara*, they accurately joyned the ends of the Tendon, that were cut, with a single thread, which grew together again, without any Balsames or Plasters, only by the Dog's licking of it, and he runs without any Impediment, only in the place, where it was cut, one may feel a knot, like a *Ganglion*.

Wepferus, de Cicuta Aquat.

XXIX. A Gentleman of about 35 years of Age was wounded with a Rapier on the right side of the *Aspera Arteria* into the internal Jugular, through his Neck, it passing out below the last *Vertebra*. The Wound was small, yet bled with a full stream, A Servant stoppt it with his Fingers, whilst I made Dressings ready of our common Astringent Powders with the White of an Egg and a little Vinegar, spread upon a Pledgit of Lint, and an Emplaster of the same, with Compress and such Bandage as it would bear. The Wound behind bled, when that before was dress'd. I applied the said Medicaments to that, and caused them to be held close till they were dried on. Then we put him to Bed, and kept him cool & quiet. I used all my endeavors for the counteracting his Blood, as is usual in such cases, and dress'd him but once in 4 or 5 days, unless I were necessitated by the bursting out of the Blood: yet he bled at times about 16 or 17 days. His Wound by the *Vertebra* of the Neck healed in few days; and the other near the *Aspera Arteria* was cured by this way of Agglutination the 19th or 20th day.

Wifeman's Surgery, p. 354.

(For Wounds of the Arteries see *Aneurisma*, BOOK I.)

XXX. N. 17 years of Age, of a choleric Complexion was shot with a single Bullet in the right Thigh, eight inches from the Groin, and reaching to the opposite side. The Parts were much torn, especially the greater Artery, whence followed an Hemorrhage

Hæmorrhage of Arterious Blood. *Signior John Trullus* being called, found the Wound taken care of by a Barber-Surgeon, and therefore meddled not with it till the next day, when coming, and loosing the Bandage, the bleeding was stopt, he finds the Parts very much red and swelled, so that the Pulsation lifted up both the hands, when laid on the swelling, wherefore he presently suspected, some Artery was wounded. Cooling and Astringent things were applied, he was kept quiet, the Wound was not touched for several dayes, though sometimes 3 or 4 Ounces of Blood would start out of it self, and presently stop again. Yet in dressing there were still the same Swelling and Pulsation, the Fever as well as the Pulsation encreasing daily. Many were called to his assistance, but the greater part left the business to Time and Nature, except *Signior Trullus*, who advised the laying of the Wound open, for to find the Artery; which opinion the rest rejected. Therefore applying the same Medicines again, the Wound was bound up, and they deferred the dressing it, till the Seventeenth day, and then we declared with unanimous consent, that the course must not be altered: Thus the Blood stopt for 13 dayes, after which it bled as it used, and stopt again of it self. On the 30th day the Wound was dressed, and we found the Swelling softned, which we were in hopes would suppurate, and when suppuration was made, that flesh would be regenerated, and that the wounded Vessel would (as it usually is) be closed up by it; but our Expectation failed us: And when his strength decayed daily, when his Fever grew higher, and his Body wasted, we then placed all our hopes in dilatation of the Wound, that the Artery might either be sowed, or tied or cauterized, and the Blood might some way or other be stopt. All things being in readiness for a work of so difficult a Nature, we go about it. The Artery about the Groin being found with the touch of the Finger, we follow it below the Groin, tying a hard *Splenium* upon it, with a strong Ligature, and we bind the Thigh after the manner of them, that go about the cutting off a Limb, that the Vessel being straitned by the pressure, might bleed the less in the operation: Then we marked the place to be laid open, with ink, and the said *Trullus* cut it, when it was marked, and presently a vast quantity of grumous Blood appeared, at least Six pounds in weight, which I took away, besides abundance of Arterious Blood, which sprung afresh from the Artery, and, when the grumous Blood was removed, showed us the way to the Artery, which being found, the Blood was stopt by a strong pressure of the Finger. *Trullus* violently compressing the Groin, and we had the Artery in view, which I separated from the adjoining Vein, and tied it first above and then below; using the same cautions which are used in *Varices*: It was torn two parts in three, only one remaining whole, which the next day after a Ligature was cut in sunder, lest the part should be contracted, before it putrefied, the rest of the Cure was performed like a simple Wound, and perfectly compleat in six Weeks.

XXXI. An exceeding spare Diet is proper for Wounds in general, concerning which *Hippocrates Lib. de Aft. n. 37.* said, *Afflict the wounded with hunger*, says *Cornarius*. But take good notice, the Man means not that all wounded Persons should be kept with a like low Diet, but according to the measure of the wound, and the danger of Inflammation; that is, a sparser Diet must be given to a greater hurt, and a more plentiful to a lesser; therefore Fasting, if it can so be, is most proper for Wounds, that are most in danger of Inflammation and Death: VVhich danger as it is less incident, we may augment the Food, and as security proceeds, we may proceed with a fuller Diet. Wherefore the Diet of the wounded has no small Latitude, to which the Indulgence of the Physician, I should rather say the Pru-

dence, should give Licence. But now, when a man would prescribe the measure of a very thin, or a very full, or middling Diet, he must above all things consider the Times: For if a Man be to be cured in the beginning, *Celsus* will quickly tell you *l. 5. c. 16.* that hunger and thirst are requisite; Nor let any man contradict it, that *Celsus* spake of such things, as must be observed in acute Diseases: For Wounds, if they be grievous ones, are much of the same Nature; by a good token, that *Hippocrates de Fract.* says, they are worse on Critical odd dayes, like acute Diseases. Another thing also shows it, that after great wounds, a man is quickly and easily cast into acute Diseases, as an acute Fever, Phrensy, Pleurisy, Stone, Convulsion, and Inflammation of the Parts. It is meet therefore, that there be a like form of Diet in both, though there be a different reason for the use in them: for indeed in Acute Diseases, properly so called, we use a thin Diet, lest coction of the peccant humor be hindered, and lest the work of Nature, who bestows her self therein, should be hindered: But Abstinence is approved of in Wounds, lest humors should gather and cause Inflammation, or Pain, and sometimes effusion of Blood, if the case will suffer it. There have been, and are, several of a contrary opinion, who maintain, that they that are weakned, and have suffered effusion of Blood, must be strengthened with food, and not further weakned with Abstinence. And we do not dissent from them, when Patients stand in need of refection of their strength; not being unmindful, that, when the Strength is good, Nature does all things, which conduce to Health: but we would only have it considered, what *Galen Comm. 1. Aph. 4.* said, "It seldom so happens, that we encrease the Strength, which we find in Sick Persons, but almost always we do our endeavour indeed to retain and maintain it in long Diseases, only in Acute Diseases we keep it a little low, for if in these we should contrive, always to keep it as we find it, or to encrease it, without doubt we should encrease the Disease. But, as we showed before, Wounds do both answer to acute Diseases, and often end in acute Diseases. Farewel therefore the Opinion of those Men, who will have healthy Mens Diet given to the Sick.

XXXII. And there are some who will allow Wine to wounded Men, which yet *Celsus l. 1. c. 26.* condemns, "Wine is hurtful to all, while there is a Fever, and while there is an Inflammation, and even till the cicatrice, if Nerves, or Ribs, or Muscles be wounded: Though, if a deep wound in the flesh, or a slight one in the skin, be of a safe Nature, it may be given, so it be not very old, and given moderately it helps to fill up. But the drinking of strong Wine who in his wits would allow? If I may not call it Poyson, *Celsus l. 5. c. 26.* has said in expresse terms it is very hurtful. And *Galen m. m. l. 4. c. ult.* writes, that an old Epigram says, Wine has the force of Fire; wherefore what more unadvised could be done, than to give them Wine, in whom it should be our greatest care, and study to prevent a Fluxion of humors and an Inflammation? Let Wounds therefore be treated without VVine, without Flesh, and Eggs, and in short, without these or any other Meats, which breed Blood, and are of much and strong Aliment.

XXXIII. If the Nerves be wounded, they must abstain from Vinegar and Acids: for, besides that reason tells us, that it wounds and vellicates the Nerves, and that in penetration it exceeds most things, several instances have also taught us, that Nerves which are not wounded, but are otherwise affected, are hurt by Vinegar, which I found by Experience in a Sicilian Notary, and in several others.

XXXIV. But all Acids should not be excluded, such as singularly check the violence of the Bile,

that most naturally irritates and troubles the wounded Parts. And therefore several of the Learned do order Bread and Meat to be prepared with juice of Citron, Lemon, Verjuice, sowre Pomegranates, and other sowre things; but the case is otherwise in Vinegar, which, because, it is very penetrable, may vellicate and make the place smart with its sowreness, and so do more hurt.

Idem.

Mayerne,
Tract. de
Laudano,
M.S.

XXX. *Laudanum* given in painful Wounds, restores Nature by causing gentle rest, and strengthens her faculties, and accelerates her Operations, Suppuration, Deterfion, &c.

Medicines especially made use of by eminent Physicians.

Balde.

1. Green leaves of Tobacco are good, applied to all Wounds.

Boëlius de
Boët.

2. There is an admirable *Arcanum* made of Crab's-Eyes, which renews, Purges and cleanses all that is contrary to Nature, which it wonderfully expels and thrusts out by the Wound. It is made in this manner. Crab's-Eyes are dissolved in Essence or Spirit of Wine for a Month in *Balneo Mariae*. Afterwards they must be distilled in an open fire Sixteen times, always pouring back what is distilled upon the faces. Last of all, the essence of the Wine is drawn 6 times from the Oyl in *Balneo Mariae*, by cohobation, then you have an *Arcanum*, 1 Scruple whereof with a Drachm of Treacle, and a few Ounces of Punitory water, given Morning and Evening, performs what is said and more.

Crato.

3. Oyl of Cloves makes Wounds, that if it be put in presently, their pain immediately ceases without Inflammation, and it brings fordid Ulcers to a Cicatrice, and cleanses them; it stops Blood, nothing more.

J. Per. Faber.

4. For healing of Wounds use this Balfame; Take of the Decoction of *Arisolechia rotunda* in White Wine 1 Pound, common Oyl, red Oyl of *St. John's-wort* 1 Pound, Venice Turpentine half a Pound, juice of Comfrey root 6 Pounds. Mix them, and boyl them, to a consumption of the Decoction and Juice, till they be of a consistence of a Balfame, wherewith if you anoint Wounds, you will bring them to a Cicatrice in a short time. ¶ *Crocus Martis* is very effectual to stop Blood, especially that which is made of red hot Steel quenched in Vinegar, till it turn into rust, or a red Powder; which Powder digested in Vinegar, till the Vinegar be coloured, and then the Vinegar evaporated, it leaves a soft substance in the bottom of the Alembick; this Liquor mixt with Bean-flower or Bole-Armenick, makes an effectual Plaster to stop Blood. ¶ The *Terra mortua* or *Caput mortuum* of Vitriol quickly stops all Hemorrhages internal and external, externally it is mixt with the whites of Eggs, internally half a Drachm of it is given with Juice of Sowre Pomegranate, or of Lemons.

Gailh. Fabri-
cius.

5. I make a most excellent Balfame only of Turpentine and Gum *Elemi*, the Preparation whereof is of small trouble, but is of most excellent use in Wounds after their Suppuration and Digestion, in Ulcers and Fistulae after their Mundification; Namely, I take Oyl of Turpentine, which comes over a glass retort in a strong fire, of a red colour, I take of this 3 Ounces, pure Gum *Elemi* half an Ounce. I mix them in a Frying-pan upon a gentle fire, till the Gum be dissolved, then I strain it and keep it for use.

5. This is a most excellent Medicine to heal the Wounds of Nervous Parts; a description whereof I had from a Spanish Priest, who well deserved Credit; Take old Oyl 4 Ounces, Turpentine 6 Ounces, whole Wheat 1 Ounce and an half, *St. John's-wort* 2 Ounces, Roots of *Carduus Benedictus*, Valerian each 1 Ounce, Frankincense powdered 2 Ounces; let

the Roots and Herbs be bruised grossly, and infused in White wine for 3 days, when the Infusion is made, add the Oyl and Wheat, and boyl them to the consumption of the Wine. Then having made a strong Expression, add the Turpentine and Frankincense, and let them boyl a little. It is kept in a Glass. It cures Wounds, as they say, in 24 hours Hier. Fabricius. time, if the Wound be first washt with Whitewine, and then anointed with this warm.

7. This *Emplastrum glutinans Galeni* is a most precious and admirable Plaster, which I use with exceeding good success; if not the first day, at least on the second, Take dry Pitch half a pound, yellow Wax 6 pounds and 8 ounces, Pine resin 5 pounds and 4 ounces, Asphaltum or Bitumen Judaicum 4 pounds, and let this be chosen of the best. ¶ There grow some follicles in Elms near the leaves, full of a Liquor, like Honey, I never saw any thing better for healing of Wounds; certainly I have seen wonders from this Liquor; it may be kept and is of use in Gouty Defluxions, especially when it is rancid. This Oyl is gathered in the Month of May, and a glass bottle being filled with it, and stoppt with Wax and a Cloth, we make a hole in the Ground, about a foot deep, and put in the bottom of the hole a little common Salt, and set the bottle upon it, which we cover all over with Earth, after 20 days it is taken out, and this Juice is kept for the Gout and healing of Wounds. Fallopius.

8. This cures all Wounds, to a Miracle; Take of *Aqua Vita* thrice distilled, and well rectified 2 pounds, *St. John's-wort*, Hyssop, Millefoil, each 2 handfuls, Frankincense, Myrrhe powdered, each 3 ounces. Infuse them for 4 days, and distill them in *Balneo*, or in Sand. Keep it. When you have closed the Wound, wet it with this Water, by pouring it upon the Wound, and laying on Pledgits, wet in it, with Powder of Myrrhe, Mastiche, Frankincense, *Sarcocolla*, Bole-Armenick, Dragon's Blood each equal parts. Make a Powder; and strew it upon the future wet with water, and apply upon that a Pledgit wet in oyl of Turpentine, and bind it, do not unbind it till the fourth day, and once every day foment the Wound as it is bound, and wet it with the same *Aqua Vita*: On the fourth day loose the Ligature, and you will find the Wound healed; but if you should not find the Wound healed, do the same again, and open it not for 3 days, wet the Wound every day, as before, then loose it, and cure it as before for 2 days.

9. An Astringent Balfam is made of Tartar, if upon Tartar, calcined to whiteness, Spirit of Wine be poured, which must be distilled with a strong fire, and poured back again, till the Spirit be sweet. This Spirit is a Specifick Medicine, which heals Grembs. Wounds.

10. This is admirable for Suppuration, Take of Marrow of a Stag, fat of a Calf, Arsenick, fresh Butter made of Cows Milk, the best Honey, Oyl of Roses, Myrrhe each 1 ounce, the Myrrhe must be mixt with the Honey, and boyled gently on the Coals, after which the rest must be added, and carefully mixt. Hafensaffer.

11. The Bleeding of an Artery could not be stoppt in a certain man by any common Medicines, a little *Magisterium Opii* was applied to the wounded Artery, and the violent bleeding stoppt to a Miracle; the Wound was closed with *Emplastrum Stipticum Crollii* afterwards, and healed. Horstius.

12. Take of Venice Turpentine half a pound, Gum *Elemi* 4 ounces, oyl of *St. John's-wort* 3 ounces, bole Armenick, and Dragon's Blood each 1 ounce, *Aqua Vita* 2 ounces; Melt them on a gentle fire. Mix them. Add of Powder of Florentine Orrice, Aloes, Mastich, Myrrhe, each 1 drachm. Mix them. Make a Balfame. This is of excellent virtue in agglutination of simple Wounds; therefore when it is poured in, some *Emplastrum diachalcit* dissolved in oyl of Roses and Vinegar must be applied over it. Paracelsus.

13. This

13. This is a most excellent vulnerary Potion, Take of Periwinkle, red Mother-wort each one handful, boyl them in stale Beer, half away. Strain it, and keep it in a glasse well stoppt. Let the wounded Man take of this in the Morning fasting, at Noon, and when he goes to Bed, 3 spoonfulls at one time. The Wound may be washed with this Decoction, and a red Cabbage leaf may be wet in it and applied to the Wound, with the rough side towards the Wound, which must be bound fast on.

Ranzovius.

14. This is one of the best Medicines, that I know, which we may most safely use for Hæmorrhages of the Membranes of the Brain; Take of Frankincense 1 part, Aloes 1 part and an half. Mix them: when you would use them, mix them with the white of an Egg, till they be as thick as Honey, then mix some of the softest Hare's down with it, and so store of it is applied to the Vesel or to all the Sore, and then it is bound up. ¶ Some reckon the Down upon the inner shell of Chestnuts in Powder, as a secret.

Eust. Rhodius.

15. The Crum of wheaten Bread steeped in hot water is effectual to stop pain. ¶ For a Palsy from Wounds, this Balsamick Liquor of Mesue's is excellent, wherewith the Neck, all the Spina dorſi, and also the Part affected must be anointed; it is good for all Diseases of the Nerves, the Palpitation of the Heart, and it is admirable good for all manifest weariness beyond all imagination, and no better Medicine can be found, where the Heart wants refection, according to Mesue. And this is it; Take of Myrrhe, Aloe Hepatica, Spikenard, Dragon's Blood, Frankincense, Mummy, Opobalsamum, Bdellium, Carpopalsamum, Ammoniac, Sartocolla, Saffron, Mastich, Gum Arabick, liquid Styrax each 2 drachms, Laudanum, Castor, each 2 drachms and an half, Musk half a drachm, the best Turpentine, what is sufficient. Mix the Powders with the Turpentine, Distill them by Alembick, keep the Water. Some Cowslips may be added to make it the stronger.

Tagaultius.

16. This has been tried in many; Wash the Wound morning and evening in Wine; then apply a little Cotton dipt in Oyl of St. John's-wort to the Wound; it will heal with this only remedy without any further trouble.

Rolandus.

Vulnera Scopetorum, or Gun-shot Wounds.

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I. There be three opinions about Gun-shot wounds. Some hold they are poisoned.

Others deny, that they are poisoned, yet hold, they have an Empyreuma. Others will grant neither but all that these wounds differ in, which are made with a bullet, from other wounds, that are made with a sharp weapon, is in the contusion and dilaceration. But if there were any poison, it must come from the Gun-powder, or from the Bullet: It comes not from the Powder, because the Ingredients whereof Gun-powder is made, are not poisonous, Sulphur, Nitre, and Char-coal, are none of them poisonous; Yea Experience testifies, that abundance, who have been so wounded with Bullets, have had no Symptome, which was any sign of Poyson: It could not come from a leaden Bullet: For it is evident that Lead, especially whole, carries no poyson in it, because many carry Bullets along time in their Body without any harm: Which, though sometimes they may be be poisoned, yet it is not so in all wounds.

Sennertus.

II. Nor is there any Burning, for first of all the Bullets would be fiery hot and melted, which are taken whole out of the Wounds. Secondly, The Burning would be perceived especially in the things that are most combustible, as in the wounded Parties Clothes. Thirdly, The Wadding of Paper or Tow, when it is put in instead of a Bullet, is discharged without any marks of burning, coloured only a little black. Fourthly, Wounded Persons feel no heat or burning, only pain from Contusion and Dilaceration, in which the Nature of these Wounds consists. But the thing that has deceived them all, is this, that other Symptoms happen in these Wounds, and require another Cure, than Wounds made by Arrows. But they ought to have taken notice, that there is a great difference between these Wounds: For Arrows are sharp and wound by cutting, but Bullets are round, and hurt by contusion: wherefore a corruption of the contused Part, and bad Symptomes may easily follow.

Idem.

III. Although what is contused must be changed into Pus, and separated from the sound Parts, yet since the contused Parts do easily putrefie, and that there is danger of a Gangrene, the common Digestives and Suppuraters, which are used in other Swellings and Wounds, are not proper here alone, especially

especially if Nervous Parts be contused, which cannot endure such moist, and simply oleous and fat things, and require drying things; but such things must be used, as indeed help to change the contused flesh into Pus, yet cause not Putrefaction, and are also Anodyne. *Quercetan*, to avoid the inconveniences which attend the use of common Suppurators and Digestives, adds Mercury precipitate: But here great care must be had, nor do I think ought may be done rashly, for where Putrefaction is present, and a Gangrene is just imminent, I do not dissuade the mixing of Mercury, yet it is not necessary in every one, nor always safe; since Experience testifies that many such Wounds are cured without mixing Mercury, and there are safer Medicines, to hinder Putrefaction. And if Nervous places be wounded, the Precipitate may easily cause great Pain.

Sennertus & Plazzonus.

IV. It is the Custome with some, if a Bullet have struck through a part, so as the Wound be open on each side, to apply their Medicines by a Seton, and when they dress the Wound, they draw it this way and that, anointing it with a new Medicine: But seeing by this means, the passage of the Pus is stoppt, and pain is caused, it is evident the use of Setons is not safe, since the same thing may be done by putting in tents on each side; and Wounds, which are open but at one end, are cured without the help of them: Yet the Tents must not be too thick, lest they stop up the passage of the Pus and cause pain.

Idem.

V. These Wounds especially are rendred very difficult of cure, if Bones in the Arms, &c. be broken, yea, they are often broken into many shivers, in which, when the Nervous Parts are often hurt, and and prickt by the fragments of the Bones, thence most acute Pains, Convulsions and Gangrene arise. Which if it happen, vulgar Surgeons frequently hasten to Amputation of the whole Limb. But though sometimes, to make provision for the safety of the whole, this must be done, yet as long as there remains any the least hope of Cure, it must not be done: For Nature in these Wounds uses to do miracles.

Sennertus.

VI. I cannot sufficiently condemn their opinion, who advise cold and very repressing things presently to be applied to Gun-shot Wounds, which are complicated with Ambustion; for they strike back, and do not draw out the fiery heat, but fix it more in the Parts, and encrease the Disease, and Vinegar especially, which the vulgar commonly uses.

Quercetanus.

VII. In all wounded Persons this must perpetually be observed, that, if a Bullet be found to be there, it be taken out with some Instrument accommodate to that use, and that, as much as may be, without trouble or pain to the Patient: For if there be imminent danger of Pain, or of other accidents, or if the Bullet lyeso, as that it cannot be found, as it often happens, it is best to leave the expulsion of it to Nature her self; for then we must by no means extract the Bullet violently, because cruel Symptomes are raised by such Extraction. For I have several times observed, a Bullet has been lodged without any trouble, nor has it hindered health, but has tarried some years in the wounded Part, without any harm to the Patient.

Plazzonus de Vulner. Sclopet.

VIII. But if a Bullet be found near a Joynt or in it, then, because by compressing a Nervous or Articular Body, it causes great pain, it must of necessity be extracted out of the Body.

IX. There are many Instruments for the extraction of Bullets. *Hildanus Cent. 1. Obs. 88.* describes the aptest. And he renders the common one in form of a Wimble much more fit, hindring the Bullet from turning and slipping.

Sennertus.

X. When we have got a fit Instrument, that is, in respect to the Wound and to the form and figure of the Bullet, we must have a care that the Lips

of the wound, and the Flesh within be not hurt or taken hold on: for if this be done, it will create the Patient great trouble, grievous pains, and high Inflammations are raised. Therefore to avoid these things, we must never dilate or open the instrument till we first feel the Bullet with the end of it, for then we must open it, and take the Bullet out dextrously.

XI. When the Bullet is taken out, we must search the bottom of the wound with a probe, that, if by chance any thing extraneous be perceived to lie there, it may be removed. And this, as I said, must be done the first visit, if possible, for then, because the wound is fresh, less pain is felt, there is no Inflammation as yet, but the wound is warm, and not at all altered. But when a day or two is over, the wound swells, and all the adjoining parts are inflamed and altered, and so they close up the Bullet: Then the place, where it lies, is difficultly found, and though it be found, yet the Bullet cannot be got out without exceeding difficulty to the Patient.

Idem.

XII. Unskillful Surgeons usually commit an error in searching for and taking out extraneous things, and in handling the parts cruelly, immediately enlarging the wound with their Instruments, and fingers, (without any consideration had of the part, and of the habit of the whole body) in searching, moving, rending, pricking, cutting, bruising, and squeezing, whereby Inflammations are often raised, veins broken, violent Pains and divers other Symptomes caused, which are often so urgent, that they force a man to neglect in a manner the principal disease, and to turn his cure to them, which would not happen in most, if they were handled aright, or but left to the benefit of Nature. We reckon therefore, that every wound should not be amputated, nor all extraneous things be taken out, nor should the wound be opened at the other end, as some foolishly do.

Botallus de Vulner. Sclopet.

XIII. We think that such extraneous things coming from without must be taken out presently, as may greatly endanger the Patient: In like manner such as may be taken out without any great loss or pain. We must expect it will be very dangerous, when the Bullet presses upon some nerve, and puts the Patient to grievous pain. Or if it be about the region of any of the *ventres*, that is, the Head, Breast or lower Belly, and we fear it will afterwards penetrate into the Part, and this (if it can conveniently) may better be done at the beginning of the cure, than deferred longer: I say so, especially in regard of the Bullet, because through its weight it varies its site, so that afterwards it cannot conveniently be found.

Idem.

¶ When the Bullet cannot be found, or when there is danger in the extracting of it, the affair must be committed to Nature, if it be a leaden one; for if the Bullet be of Iron or Brass, there is danger, that the wound will not heal, because of the Rust. But if the Bullet stick in some noble Part, or in one which may draw a noble Part into consent, and if the Wound endanger the Patient's life, the Surgeon must not attempt the extraction of it, because by this means he can do no good, but only hasten a Man's end, which the Wound it self would in time procure.

Sennertus.

XIV. Yet we must have a care, while we are intent upon the work of Extraction, that a great flux of Blood do not come, whereby the Patients lose their strength, which often happens in an Empiricks hands: Therefore we must first endeavour to stop the Blood.

Botallus uti supra.

XV. But if there be a Fracture of the Bones, and any splinters of them be denudated of the *Periosteum*, which cannot be taken out without much pain, they must be taken out; otherwise they must be left in: for Nature will afterwards facilitate these, and greater pieces also, if there be any, for their exit, and

Idem. and the Bullet at length, because of its weight, will sink into some cutaneous Part, whence it may afterwards be taken without any harm.

XVI. It is very rare, that a Wound must be dilated to take out the Bullet, but sometimes we are forced to do it, that we may get out broken bones, which are sometimes too great, to come out at the external Ulcer. Sometimes also, when the Wound is in the Head, and any injury is suspected in the Skull or in the internal parts: Sometimes, when the Bullet runs along only under the skin, whereby the skin in that place would perish: Also when a Bullet is perceived to be in the Breast, or in the lower Belly, which cannot get out because of the narrowness of the wound: And sometimes we are forced to make way for it, on the other side, that we may get it out that way.

Idem. XVII. According as there are different opinions of the Nature of Gun-shot wounds, so divers sorts of Medicines are applied to these Wounds. Some without any discrimination, at the first Application apply only the white of an Egg, as if these were simple wounds. Others mix the white of an Egg and Vinegar. Others mix fair Water and Vinegar. Others add also some astringent Medicine, and Bole Armenick, Powder of Corall, Dragon's Blood, the three Sanders. Others add Turpentine and the oyl thereof. Some apply Treacle and Mithridate. Others, at the very first strew caustick and very hot Powders upon the wound, and apply common oyl, oyl of St. John's-wort, oyl of Elder, and other hot oyls. Some apply a Caustick, eating Medicines. Others run a hot Iron into the wound, and do it several times. But whether in the beginning either the white of an Egg alone, or Astringents mixt with it, be a proper Medicine we may easily judge, when we must take the beginning of the cure from Poyson, (whether Gun-shot Wounds be poysoned, See §. I. of this Title) because life is greatly in danger. And these Medicines have an astringent faculty, and the white of an Egg especially, of repelling and drying: Hereby the humors are condensed, the skin made imperiparable, the Poysonous quality is driven to the inner parts. Moreover, all such Medicines hinder the exhalation of bad vapors; whereupon cruel Symptoms, with great torment to the Patient, and hazard of his life, arise.

Plazzonus.

And according to their Opinion, that think these Wounds are not poysoned, there is danger in applying Repellents, because they hinder the due digestion and maturation of these wounds, that have a Contusion joyned with them, which requires changing into Pus. But what such the Digestives should be, see the preceding Title of Wounds.

Idem.

XVIII. And though these Men argue, that such Medicines stop bleeding, hot Intemperature, and other Symptoms of this kind; yet I answer, that it is very rare, for any great effusion of Blood to follow these wounds; and though sometimes it do follow, yet it must not presently be stopt: For when the wound bleeds much, it first prevents Inflammation usually, and, which is more, it may evacuate virulent ichores. Therefore a prudent Surgeon should in the beginning abstain from the application of Coolers, which otherwise through his ignorance and mistake do much harm, and put the Patient in further danger of his Life.

XIX. Repellents are proper, when we would keep back humors from falling upon any part. Which we ought to do, when the coming of an Inflammation is feared, or when one is begun or encreased. For upon this account we apply repellents to all Wounds, Contusions and Fractures at the very first, if it can be done: for by these means much humors are kept from flowing into the part affected. We use them for the first three dayes, or at most (if an Inflammation be not ur-

gent) four: But if the Patient be well set (as we say) and of a good complexion, two days will be sufficient. For when Coolers are either too strong or longer used than they should, the Ulcer grows crude and ill conditioned. Wherefore I have often been angry with ignorant and obstinate Surgeons, some of whom, would insist 7, others 14 dayes upon Repellents, which was often attended with the worst event. It is sufficient to use them only till the Concoction of the wound appear. But Repellents must be now and then repeated, not as the unskilful Gang do, who infuse Tow or Lint in Oxyerate, or Oxyrrhodinum, mixt with whites of Eggs, and such stuff, and apply it, and do not remove it all the day: which grows presently hot and tough, and then it does not repell, but hinders transpiration, whence many troublesome Symptoms arise.

Botallus?
cap. 8.

XX. Yet their opinion is not so much to be blamed, though not altogether to be embraced, who rather chuse Spring-water mixt with Vinegar, and mix that with other things, whose opinion is confirmed by Celsus his Authority, Lib. 5. *fac. Medic. Cap. 26.* who says, that cold water, and a little warm, is good for wounds. And they say Vinegar is proper, because it resists Putrefaction: hence it is that corruptible things are preserved in Vinegar from putrefaction and corruption.

Idem.

XXI. In like manner Turpentine, its Oyl, and Treacle do very much heat of themselves, therefore they are not so convenient in the beginning, unless they be mixt with other Medicines.

XXII. But as for application of hot Oyls, I cannot much condemn the opinion, as I cannot theirs neither, who apply actual fire; for the poyson which is in the wounds, is brought out by the virtue of fire. Nor need we question the possibility of actual Fire's resisting a poysonous quality by heat, for in Virtue and Power they are extreme contrary one to another, the fire attracts the poyson, because every like draws its like. Besides, the hurt part is strengthened by virtue of the fire. A Caustick also does the same, which is much commended by some. Yet I must ingenuously confess, that in these wounds in the beginning of the cure I never used hot Oyls or Fire, nor would I persuade any Man to use such kind of Medicines, because the Patients are afflicted and cruelly pained with the application of them. For in this way of cure I have seen most intense Pains, and violent Inflammations, great flux of humors, and other bitter Symptoms arise. And I use to reject these Medicines, because they do little good, and constant Practice and Experience has taught me better, which I use with great success and benefit to my Patients: For they are such as do not at all draw the humors, yet gently repell them, nor cause any Inflammation, but rather resist the poysonous quality in the beginning, and avert the power of the poyson, and its communication, from the Heart and other principal Parts.

XXIII. At the first visit these two things especially are immediately to be considered by the Physician, and upon these two all his Pains must be spent, that is, the poysonous quality and conflux of the humors. Nor let any man object, that in the beginning regard should be had to burning, contusion, attrition of the part and the bleeding. For I answer, that this Wound is not simple but complicate, and therefore we must first fall upon that, which is most urgent. And therefore we must begin the cure with poyson, wherein consists the greatest danger of losing life, the fluxion must be stopt, and other things which may increase Putrefaction, infect the Spirits, and cause other Symptoms; and in the second place, we must look after Pain, Inflammation and Bleeding. Therefore the poysonous quality must be resisted immediately. Now all Authors agree, that in every wound, where there is suspi-

cion

cion of poyson, attractive Medicines must be used immediately at the beginning, and things that evacuate by the part affected: Therefore we ought either to scarify the wound, or apply cupping-glasses, or do both together. But I commonly with good success always cut the Wound, open the part a little, and make incision, that the Blood may run out, and the poyson may be dissipated together with the Blood, and this dilatation or opening of the wound is very necessary, both that extraneous bodies may easily be got out, and also, that the *Sanies* and superfluous Humours, which breed in bodies affected with these wounds, may be conveniently purged, and also the cavities and *Sinus's* of these parts may be prevented, which otherwise usually happens through the unskilfulness of Surgeons: Besides, I clip away some part of the torn flesh, which operations indeed I use instead of Sacrification: Then also I apply a cupping-glass to the part, if there be one at hand, to take away the poysonous quality: and when these things are done I presently apply some things to the wound, that I may prevent the poysonous quality and flux of Humours, and if at any time there be an *Hæmorrhage*, I take some Yolks of Eggs with a little of the White; for the White alone applied does a great deal of harm, but when it is mixt in a small quantity with other things, it loses that astringent and emplastick faculty, to which I add oyl of Turpentine, *St Johns wort*, *Euphorbianum*, oyl of unripe Roses, adding a little *Terra Sigillata*, oriental bole Armenian, *Scordium*, powder of Tormentil root, and Myrrhe; for these things are violent resistors of poyson and putrefaction, as also *Galbanum*, *Bellium*, &c. draws out the poyson, in which Medicines Tents and Pledgits are dipt.

Idem, Ca. 19.

XXIV. After we have provided for the wounded part, we must then take care of the whole Body, And in this case we ought to breathe a Vein; for this is the best Remedy of all universals. For though Bleeding may seem not at all convenient in Gun-shot wounds, which have a poysonous quality joyned with them, because thereby the said quality is drawn into the inner parts of the body, and therefore to the principal parts with great peril of life: For in applying Cupping-glasses and Scarifications to the wounded part, the intention is not only to evacuate the virulence by the part affected, but by revulsion to attract it, that it penetrate not deep, or infect the principal parts. Bleeding by opening of a vein is altogether contrary to this intention; for it does not evacuate or expell the poysonous quality, but rather gathers and draws from the part and circumference to the centre. Yet I answer, that when it is said, A Vein must not be opened in poysoned wounds, this must be understood of Poyson from the whole substance, and not of a poysonous vapour. Besides, a poyson from the whole substance quickly creeps to the heart, and other principal parts, but an halitious poyson is not so soon communicated to the principal parts. We have an example in the bite of a mad dog, because sometimes many days and months pass, before a *hydrophobia* comes; so in Gun-shot wounds the Poyson is not communicated presently, and much less when Blood is let quickly; for Blood-letting is very good in Gun-shot wounds for revulsion sake; and draws no virulence inward, because in the beginning the venomous quality & poysonous Vapor is not so penetrating of it self, unless it be so attenuated by the heat and spirits, as to infect the heart, & come to the principal parts, especially when its passage is hindered by scarification and application of drawing Medicines. Wherefore always in these wounds as well as in others, Blood must be let by opening a Vein, to prevent a defluxion of Humours, and especially of bad juices; after which, if the wound be inflamed, bad Symptoms usually happen, as great pains, *Erysipelas*,

Grangrene, especially if there be a Catarrhmic in the Body.

XXV. Yet Blood must be let on this condition, that, when topical Medicines are applied, a vein may be opened, for so it may do good, but never harm. But large Bleeding cannot be approved of, and herein the greatness of the wound must not be so much regarded, as the plenitude of the Body, a gentle purge, or Clyster being premised.

XXVI. The next day, and the second visit, before the wound be looked on, the body must be cleansed, and to this purpose we must prescribe some gentle Medicine, but not a strong purge, because in a poysonous quality, which comes from without, violent purging is not so well approved of by Physicians. *Galen 4. m. m.* affirms that purging is not only proper in plenitude, but especially in abundance of bad juices, and in a great Disease. Therefore in these wounds it is very proper to give some gentle Medicine. Which is approved of also by *Hippocrates 1. de vulner.* For Purging by the Belly, is good for most wounds, because bilious, thin and serous Humours are purged; for such Humours might easily flow to the wounded part, and cause Inflammation, Pain, &c.

XXVII. Some put Butter in their Digestive Medicines in the beginning, yet I ever abstained from the use of it: for it greatly corrupts, putrefies and relaxes the part, but here we must always prevent putrefaction and corruption.

XXVIII. Some prefix the seventh day as a set bound for Digestives: Others go beyond this time, tarrying for the separation of the putrid flesh, that encompasses the Lips of the wound, unless what has been already suppured, be removed by abstersives. But I think the set term of leaving off a digestive Medicine, is, when we see the wound is concocted. Thus, you cannot (as some blockheaded wound-mongers do) prefix either the seventh or any other day certain.

XXIX. We must observe in the application of these Medicines that these digestives must rather be liquid, so as they may reach to the bottom of the wound: For Tents dipt in these Medicines must be applied, that the whole passage of the wound may be kept open, and that Medicines may be carried all over it.

XXX. Because ignorant Artists frequently commit Errors, to the no small damage of their Patients, they must be cautioned, that the Tents be neither too thick, nor too long, too hard nor too sharp. Long ones prick, thick ones extend, and also hinder the foul steem or any other putrilage from getting out of the wound. Hence Gangrenes of the parts, affected, heat of the liver, & swellings, which for the most part use to follow putrid wounds, and hence come fevers which will scarce go off again. Let them therefore be made limber, smooth, small, of soft and fine Lint or Cotton, or some such matter, that they may not cause pain. Which things must especially be observed, if there be a fracture of the bones.

Botallus, c. 16.

XXXI. A simple Fracture without a wound will admit of all kinds of swathing, but the case is far otherwise, where it is with a wound, especially one made with a shot, which requires a particular way of binding. For in a simple fracture we only look on it after the seventh day, and then bind it up, but in a Fracture with a wound, we must of necessity every day look upon the broken and wounded Limb, and take care of the wound, that the *Sanies* may be wiped off, and the poyson got out. For in a Fracture with a wound this is the chief contra-indication that hinders the healing of it, and protracts the cure a long time, because upon account of the Fracture it is necessary to keep the hurt Limb immoveable for several days, that the Bones may be well knit, which since rest does best perform, no doubt but it is of necessity required.

But

But upon account of the Wound we are forced frequently and before the time to apply local Medicines, for this end, that the purulent matter and excrements bred in the wound may be got out. The Ancients and the Moderns propound various wayes of binding in a Fracture with a Wound, who do all mean well indeed as to this intention, but they do not satisfie it; And therefore as the ways proposed by them do not please me, so I am very well satisfied with those ways which are observed every day in Practice, and very often experienced by me, to my credit, and to the benefit of my Patients. The chiefest therefore, and most approved ways are two, by benefit whereof broken Bones are kept in their place, and the wounds may be loosed. The one is performed by Swathes or Rowlers; the other with Plates or Splints, which are made of flexible matter.

The first way is best, when there is great Inflammation: The other, when, besides the Inflammation there is danger of great Pain. Wherefore, if we be called to a Patient in the beginning, who is ill of a Fracture and Wound made with a Shot, because as yet there is no singular Inflammation of the Part, after the Bones are set, and the Wound is taken care of with proper Medicines, the Fracture, Wound, and the whole Limb that is hurt, must be bound, that is, in such a manner, as that we may look upon the Wound every day, and take off the rowler, without moving the broken Bones. Therefore not only one single rowler must be taken, but several about an Ell long, and three Inches broad: for several rowlers are necessary, because not only the Fracture and Wound must be bound, but the broken Limb also must be bound for the space of 8 inches, 4 on each side of the Fracture. Ten therefore or Eight of these Rowlers must be taken: Ten, that is, if the Thigh be broken, and we place all these in order upon a broad piece of Cloth, so as one is placed half the breadth over another, and so we rowl one after another, that is the head of the first contrary to the head of the next, that is in this order, your Servant must hold one head tight, and the Surgeon the other, as strait as it is necessary to bind the fractured Part; and then we bind on another, and it must be straitened as much as the Patient can bear. But this must be taken notice of, that when we begin to rowl over, we cease pulling of the Rowlers, for so, whenever we would dress the Wound, we take off the Rowlers the contrary way, and bind it again, without moving the hurt Limb. Which excellent and safe way of binding differs from what *Fallopian* propounds; for he takes *Splenia*, and rowls the Limb obliquely round with them, yet the Part is bound unevenly. But we apply these Rowlers, not in an oblique manner, but circular and direct: for this way the broken Limb is bound equally and without any trouble. And if the Limb be not quite shot through, we may also make a case (or *capsula*) and yet it will be sooner and safer healed.

But because sometimes in shots it happens, the Bone is so broken, that the whole Limb almost is torn, so that upon account of the pain and greatness of the Wound, these Rowlers, and this way of rowling cannot be used in the beginning, then we go to another Instrument, which we use instead of Ligature; that is, we take a Plate of Brass, or of other tough and flexible matter, yet firm, of which a hollow Instrument is made, like a Pipe, made into the form of the broken Limb, that it may encompass the whole Limb that is hurt: it is armed on the inside with Cotton, for a Cushion, and we place the broken Limb conveniently in it, and bind it fast, that it may not be moved. But before this Plate be applied to the part, it is necessary, that we first fit it, and make a broad hole in that part, where the Wound is, that we may conveniently keep the Flesh and the Limb immoveable

upon account of the Fracture: For by this way, and by this Instrument, the broken Bones are not stirred at all, but are rather kept in their places; and the Wound may be dressed every day; and although the Wound go quite through the Limb, yet the Plate may have a hole made in it on the other side, so that all Wounds may conveniently be cured, without any molestation of the Patient; or hurting of the Fracture. For several in their Practice have with great success and felicity used this Instrument in curing Gun-shot wounds with fracture of the Bones. Plazzonus.

XXXII. A supervening Hæmorrhagy is stopt with Obstruents, Astringents, Revellents, cutting off the bleeding Vein. If the broken Vein appear, it is safest to close it with a hot Iron. If it lye deep in, fill the Wound with this Medicine; Take of Bole Armenick 4 drachms, Mastich, Frankincense, Aloes each 1 drachm. Mix them all with the white of an Egg. If by these things you cannot obtain your desire, have recourse to red hot Instruments. For you will obtain your end quicker, safer, and with less hurt than with Caustick Medicines, which create much pain for many hours; after which sometimes, the stopt flux comes anew, to stop which, the red hot Iron has not so much virtue after caustick Medicines are applied, as before the use of them, because the crust made by them is no small impediment to it. But to do the work with a red hot Iron, requires a Man skilled in Anatomy, who knows well the Site and Position of the Veins. Botallius. c. 15. (See BOOK VIII. Hæmorrhagia.)

XXXIII. When a Wound is made in the Head by a Shot, the Wound arises not only by way of Puncture, but also by way of Casure and Contusion: for the Bullet pierces by Contusion, and it dissolves and tears the natural union of the Parts, whereby the *Cranium* is chiefly affected, especially if armed with a Helmet. Therefore a Wound in the Head, and Contusion both, will either be in the external Parts only, as in the skin and *Pericranium*, or with hurt of the Bone, and of the internal Parts also. If the skin only be wounded, and the *Pericranium* with the skin, let the Wound be cured, as wounds in a fleshy part. Yet this must be observed, if in the Wound we see the *Pericranium* is much hurt and swelled, the Wound must immediately be dilated, making incision in the *Pericranium*, and separating it from the Skull. For by this means it never putrefies, nor does matter gather upon the Skull, and the Wound is sooner healed. But if there be only a Contusion in the skin without a Wound, then apply to a whole skin something that has a virtue to dissolve, digest, exsiccate, strengthen, and ease Pain. Plazzonus.

XXXIV. We must observe this perpetually, if we perceive the Bone is hurt, or laid bare, or if we fear the inner Parts are hurt, presently the Skull must be laid bare, the hurt skin must be cut, and it must be divided from the *Pericranium* and the Skull. For the skin does easily heal, though it be cut off needlessly, as *Celsus* says, *Lib. 8. Cap. 4.* For we must totally make bare the Skull, that we may scrape it, and perforate it, or when there is a fracture, take it out, if there be occasion. Idem.

XXXV. When we must trepan the Skull, all delay is dangerous. Therefore we must not trepan it only the first, second, third, or fourth day, whether to raise, or to take out a Bone, but the seventh, eighth, ninth, tenth or eleventh, or any of the following dayes, if the case require it: For we need not here (as the unskilful do) fear any critical dayes. Critical dayes must be observed in Wounds only for the Prognostick not for the cure. Indeed in Fevers, and other Diseases, which Nature her self alone oftentimes uses to overcome, they must be observed both for Prognostick and Cure: But in this case no salubrious work can be expected from Nature. For she never trepans, nor raises

Botallus.

what is deprest and sticks (except in young Children.)

XXXVI. Although drying Medicines be commended in every wound, newly made either by puncture or caesure; yet that place of *Galen 6. Meth. in fine* (who prescribes things they call Cephalicks presently, and to the end, of Illyrian Orrice, flower of bitter Vetch, *Manna*, *Aristolochia*, bark of Allheal Root, and things that exerge without biting) has misled many. For what else do the ignorant common sort of Surgeons, bolstering themselves up with this opinion, but clog the wound with this powder? What Nature, I pray, is so strong, as to be able to endure so inept using of any Medicine? I do not say indeed, that the Medicine is pernicious in its own Nature, but because it is ignorantly used; for being so applied it dries more than it should, yea it wastes the very flesh, and sometimes heats the Brain beyond measure; so that I have seen some people dy, I suppose rather for such a cause than for any harm received in the internal parts from the weapon when no noxious Symptome in them had gone before, and they were better every day than other for the first seven or eleven dayes, while they committed themselves to country Barbers, without the excessive use of Cephalicks (as these wonder-working Surgeons use to boast) But leaving off the first, and other people being called, who put too high a Value upon this Cephalick powder, and other Medicines, they call Capital, quickly more grievous Symptomes followed, which killed the Patient. I would often open the heads of such bodies, that it might be known, whether there were any latent injury from any wound, namely, whether there were clotted Blood, or an inward Fracture, or any such thing, in whom nothing was found, besides Pus gathered under the Membrane, made of the proper substance of the Brain corrupted: Which did certainly show, that the Remedies were more to be blamed than the greatness of the wound, when it was manifest the Patients were observant of orders.

Idem.

XXXVII. *Galen* sayes well in the place before quoted; "Those Bones, *saieth he*, which are violently broken, whether they be severed from the sound, or be yet after a sort conjoynd, must alwayes be removed: Especially if such be with the wound of the Skin. We make this distinction, because we do not allow that Bones may be taken out in every fracture of the Skull or external Ulcer: Nor must all they, that are with a wound (as *Galen* sayes) be followed to the very end of the fracture, as some foolish Surgeons do, who that they may come to the utmost end of every fracture make an exceeding large, and a more mortal wound in the carnos part, now I call it a carnos part, whatever is contained on the outside of the Cranium.

Idem.

XXXVIII. Contusions of the Cranium are some of them with fracture, others without fracture, and some of these with a Wound of the Skin, others without. But when the Contusion or Fracture are without a Wound, indeed the Surgeons business is doubtful, namely, Whether he should divide the Skin, and lay open the Bone, or insift rather upon dissolution and exsiccation without section? Though this be an arduous question, some may think it trivial, and presently decide it for Cutting for the reasons following, namely, because contused Wounds putrefy, because Blood gathered in the place of Contusion and extravasated (it is called an *εγκύμαμα*) it also is corrupted, and because many other mischiefs usually follow: To say nothing here of the Pain from extension, and the mischief arising from the compression of the contused Bone. But the Reasons which maintain the contrary opinion are not enervous, namely, Because those contusions and fractures of Bones are more dangerous, difficult of cure, and of longer continuance which are with Wounds, than those (if

there be otherwise a parity of cases) which are without. Wherefore *Galen* speaks most skilfully *comm. 3. de fract. textu 43.* where he sayes; "You must know, that all things which are under skin, delight much in skin, and that nothing which is under it, can be denudated of it without damage. But what wonder, if those things which have a proper and connate covering from the skin, be alwayes delighted with it, and be indisposed and troubled at all other things? Wherefore I have often observed, when I have not cut off part of the Skin, but have laid on a gain that which was separated, it has grown together again, and which is more admirable, when immediately after the blow the place has been black. Whence we gather that the Skin must not alwayes be opened, when it is not wholly divided, for the reasons alledged by *Galen*. Which I have sometimes confirmed by experience. And that Bones, little or nothing made bare of their proper covering, do sooner heal or set, ordinary Practice proves, for experience shewes that many, at least some, fractures without a Wound, wherein many pieces of Bones are perceived to be separated from the main Bone, are sooner cured, than a small contusion or fracture of the Bone with a Wound or tearing of the Skin. For in a fracture without a Wound, the Bones not altered by the Air or Pus, do easily knit, if Inflammation can be hindered by Art. But in the other we must tarry for exfoliation of the firm Bone, which also is not made till after many Months, and especially if they be hard and great. But in the Head, because they are thin, they scarce pass the second Month, without natural detersion or exfoliation.

Idem.

XXXIX. Whether does all manner of Fever hinder the Trepanning of the Skull? *Hippocrates l. c. n. 28.* "Wherefore when you understand that a Fever invades a Man, and from several other signs, that it is coming upon him, we must make no delay, but either perforate the Skull to the Membrane, or scrape it with a *scalprum*. Which text is not unworthy of some discourse, nor must it be past over without distinction. Certainly I have seen some cured, who were wounded in their head, with a hurt in their Skull, and taken with a Fever, whom I would not suffer to be Trepanned. For every Fever does not perswade Trepanning, but only that which is caused by the Wound. But here lies the difficulty to distinguish the one Fever from the other. Now the Fever which comes from a Wound, though usually it have the greater Fits every third day (which is common with all other Cholerick Fevers) yet it has these things, as it were specifick, namely uncertain chiness, both as to duration, magnitude, and time of coming, which comes most violently and ofteneft upon the critical dayes of the Wound; besides the Fever fit followes the cold on the critical day and uncertain sweats come, without any benefit. But yet it has this thing more especial, that it rarely tinges the Urine, but it appears well concocted, in its perfect colour, as the Patient used to have it. We may add some other things which follow, to wit, some trepidation in the Nerves, especially in the Wrist, drowziness, heaviness of Eyes, difficulty in looking on the Light, or other things before enumerated. And these are the things which *Hippocrates* means by other Signs. Wherefore we must not say, There is a Fever, therefore we must Trepan; or, There is a Fever, therefore we must not Trepan; But, A Fever is caused by the Wound, therefore the Skull must be Trepanned: Or also, though there be no Fever, but some other potent Symptomes, it must be Trepanned, if the strength be good, lest you go about the work on the day of death and so discredit the Remedy to no purpose. Therefore the sooner you do it, so much indeed the better.

Idem.

XL. I must needs take notice of this, a thing wherein sometimes I have seen the ignorant offend, namely in section of the Skin, where the Fracture of the bone is great, in which Fragments of bones are wholly moveable and severed one from another. Which often happens in them that are Wounded with the blow of a great stick, or some such weapon, or by a violent fall, in the *bregma* especially, and in young men above all. Here, I say, in opening the Skin, too heavy a hand forces the Incision knife into the Brain by the *hiatus* of the Fragments, wherefore here we must act with the greatest care possible.

Idem.

XLI. Great care must be taken in the use of the Trepan, for the circle must be searched with a Probe or with a blunt Elevatory, for oftentimes the Skull will be quite cut through on one side, the second Table on the other side almost remaining entire; which comes to pass either through the Artist's fault who perhaps holds not the Trepan to a perpendicular, or because the Skull is not in all places alike thick. When therefore the skull is in some place wholly divided, and in the rest of the circuit cut so thin, that it may be broken with an Elevatory, the Trepan must be laid aside. And if any blood come from within, before you have taken out the Orbicular bone (as it often does) it will not be amiss to let the bone alone for some days, according to Hippocrates his advice. For in a perforated bone, left after perforation, no mischief can follow, for what is left is made thin. And the reason is this, that the brain may not suffer from a Tegument, that is new, and aliene from its nature, so that it is safer to go from one extreme by little and little to the other, especially when any blood comes after perforation, whereby perhaps the brain will not be a little relieved, unless it come from the membrane, wounded by the Artist. Such an operation must be performed with a most attent mind in tender age, because of the thinness and tenderness of the skull.

Idem.

XLII. In wounds made by shot in the belly, after blood-letting, &c. purge the body, especially if it be full of bad juices, carrying off such humors, as you shall find predominant; But we must take great care, the Physick do not vomit, especially when the wound is in any of the *ventres*. For it fills the Head and Breast, and vexes all the parts with its violent motion, and sometimes pains them.

Idem.

XLIII. If the Bullet have passed through the *Epigastrium* on each side, without hurting the Liver, Spleen, Stomach, Guts, Bladder, or any of the great Veins or Arteries, which it has been my fortune sometime to see (And I know, it so happened some years ago, to the Generous Captain Jannavelt in Piedmont, who lives well in health among us this year 1681. who, when he had fought a whole day, received a shot in the middle of his Abdomen, without any of his Bowels being hurt.) I think the wound should not be enlarged, for it will do no good, but rather harm. Because the greater the orifice is, the more will the Bowels be burnt by the external Air. But if any of the parts aforesaid be wounded, the dilating the orifice of the wound in the *Epigastrium* will do no good, seeing there is no hope of a Cure.

Idem.

XLIV. But if the Bullet remain within, and you have no certain sign, that any of the said parts are hurt, you must endeavour to get it out, the

Patient lying upon his wound, and turning himself this way and that, yet so as that the orifice of the wound may look directly to the ground: Then the experienced Artist must search for it, and bring it out with a bended Probe. But if it cannot be found, and if the wound be in a part, which may suffer dilatation without much danger, it must be opened length-way of the muscles, till it will admit a man's fore-finger. And the Instrument for dilatation must not be sharp pointed, lest the Guts should be pricked; when you perceive the Bullet, you must endeavour to get it out by Art, but if you cannot well do it let it alone. Certainly I have seen some shot in the Belly who have lived after, with the Bullet, which it may be, had fallen out otherwise if we had been forced to seek it and take it out. Among which there is an Armour-Smith now alive, who was shot a little above the right Groin, and the Bullet lodged, but could not be got out, or so much as be found; yet I would not suffer the wound to be enlarged. Therefore it must rather be left within than make a Section, that is either dangerous, or but with little hopes of obtaining one's desired end.

Idem.

Medicines especially made use of by eminent Physicians.

1. A noble Bezoardick Plaster; Take of Wax 1 pound, Turpentine half a pound, dried Toad half an ounce, *Bdellium* 2 ounces and an half, white frankincense half an ounce, white Amber one ounce and an half, Serpent's Skin dried N^o. 1. Figs N^o. 8. incorporate and mix them all according to Art. In the end add prepared Magnet 1 drachm, *liquor Arsenicalis* 2 ounces, Spirit of Salt half an ounce; Boyl them all, keeping them continually stirring, then pour to them Oyl of Scorpions, 1 ounce and an half. Mix them. Make a Plaster. It is very good in gun-shot Wounds.

Joh. Agricola.

2. This is an approved Medicine in a deep wound made by a Shot. Take of Bay-berries, root of *Aristolochia rotunda* each one drachm, Crabs dried in an oven 1 drachm and an half, dried Burnet half an ounce. Make a powder; which must be boyled in 3 pounds of Wine to a third. Let the Patient drink 1 ounce every day, and foment the wound with it, or inject it into the wound.

Platerus.

3. This drives out all poyson from a poysoned burnt wound by a shot, as I have often tried, and though it be an ordinary Medicine, yet it may be reckoned a great secret; Take of Swallow-wort 1 ounce, Valerian, Tormentil, each half an ounce, Polypody 2 ounces, Garden Angelica 4 ounces, wild Angelica, Marsh-mallow each two ounces, nettle 1 ounce and an half, root of *Thymelaea* 1 ounce and an half, root of Scabious, Valerian, each half an ounce. Let them be all gathered between the fifteenth of August and the eighth of September, which must then be cut and put in a glazed pot well stoppt, with a sufficient quantity of vinegar, and so let them stand 12 hours. Then let them boyl an hour and an half. Then pour off the Vinegar, and when they are dried and beaten to powder, add, 12 berries of the herb *Paris* and 36 leaves. Make a Powder, the dose is 1 drachm in white wine.

Quercetanus.

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A GUIDE TO The Practical Physician.

BOOK XIX.

Concerning Remedies borrow'd from Diet, Surgery and Pharmacy.

Acidulæ, or Mineral Waters.

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I. **S**prings being endowed with the faculties of both hot and cold Minerals, must needs cure both hot and cold Distempers, in the same and in divers Bodies. And seeing it is the property of heat to rarefie, incide and attenuate; and of cold to condense, astringe and incrassate; 'tis no wonder that these waters produce contrary effects, namely (for in-

stance) both procure the Terms in Women; and also stop their immoderate flowing. For these Waters are an Empirical Medicine, and the same thing happens to them as to Treacle, which seeing it is compounded without reason, and receives into it many things that are superfluous and repugnant to one another, comes to cure various and those contrary Distempers. Heet, cap. 9i & 13.

II. A poor Country-Fellow being a long time troubled with Bleeding at the Nose and with the *fluxus hepaticus*, drank the Mineral waters disorderly, observing neither hour nor season: yea in the very drinking of them, whilst others use Anniseeds or Lozenges to warm their Stomachs, he eat raw Apples, laughing at those that advis'd him better: But before a Month went about, one of his Legs gangren'd, so that he was glad to have it cut off; and within a Month more the like Gangrene seiz'd upon the Arm of the other side, about which whilst consultation was had whether it should be cut off also, the poor Man died miserably. Heet, Disf. 29.

III. Whether should the necessary quantity be drunk all together, or be divided into several Doses? This latter way is the safer: for 1. being drunk at one draught, the Stomach is so loaden with it that it vomits it up: or 2. if it should be kept, its weight would make it pass through so quickly, that its vertue could not be put into act, nor it self be distributed into the Body: and 3. seeing they are drunk actually cold, they would offend the Stomach by their coldness. Sebil. p. 346.

IV. No Nation seems to drink Mineral waters more freely than the Italian, for Fallopius prescribes them to 120 ounces. The Germans are more sparing, for Andernacus will not have the largest Dose to be above twenty seven ounces. Though we cannot appoint a certain measure, which may be as a Standard; yet we think it profitable to express in some latitude the least, middle and greatest Dose: For people that are grown up let the least Dose be eight or twelve ounces, the middle thirty two, the highest, sixty four. And that a convenient quantity

tity may be prescribed, we must consider the circumstances, as, the Disease, the Temperament, Strength, Age and Sex of the Patient, the climate, time of year, manner of life, custom, habit of Body, parts affected, and the like. Of which, the greatness and vehemence of the Distemper is the *Indicant* properly so called; the strength of the Patient is the *Permittent* or *Prohibent*; the other circumstances are the signs of the weakness or vigour of this: But the most certain rule for the quantity is the Euphory or well-bearing, when the Stomach dispenses well with it. But daily experience shews, that those that drink the *Spaw*-waters but in small quantity, receive but small benefit by them, yea are often prejudic'd: whereas those that drink them plentifully, are cur'd of great Distempers by them: so that *Frambesius* says rightly, that the more one drinks, the more good he receives, if so be they pass well: Therefore let every one consider his Stomach, how much Water he can bear, and how soon he passes it; and let this be his rule, *That the best Indication is taken from Hurters and Helpers.*

Idem,
p. 53.

Heer Spadacren,
p. 114.

Sebis, p. 516.

Claudin. de Ing. Scit. 1.

Heer p. 119.

Sebis, p. 509.

V. Authors advise to ascend by degrees to the highest Dose, that the Stomach may be inured by little and little to the Waters as being actually cold, and also that it may be understood how the Patient will be upon the drinking of them, for a mans peculiar temper does not presently appear. But we here admonish again, that respect is not to be had so much to the number of cups, as to the Euphory or well-bearing of the Patient, and that the measure is to be accommodated to every ones nature.

VI. When one is once come to the highest Dose, some advise to keep to it till the end: But because experience teaches that the diseased can seldom hold to the greatest Dose for four or five dayes, but that they fall into Vomiting, Fainting, or difficulty of Breath; it is more adviseable to follow the counsel of *Herodotus* in *Oribasius*, viz. to descend by degrees till one come again to the first and least quantity.

VII. *Ryetus* admonishes prudently, to drink that quantity which a Man prescribes to himself, in as little a time as may be, that is, to make an end of it in half an hour: for otherwise, seeing these waters pass quickly, it would come to pass that the first should pass before the last be drunk: which although *Fallopins* allow, yet 'tis generally disliked, because by this means the last would be evacuated more slowly to the great prejudice of the drinkers; and this is proved by daily experience, and as many as have been often at the *Spaw*, will subscribe to the truth of it.

VIII. Some prescribe a certain number of dayes: others have regard to the colour and consistence of the evacuated water, which if for two dayes together it be such as before it was drunk, they then think 'tis time to abstain: We think they are to be drunk so long as the Patients bear them well, without confining them to a certain number of dayes; and that they are also to be drunk so long as seems necessary for the perfect cure, or at least for the bettering or manifest change of the diseased. But as for the two first opinions we can subscribe to neither; for as for the first, it is impossible to prescribe a certain number of dayes because of the diversity of Diseases and Morbifick causes; and as to the second, it cannot be a certain rule, seeing the Waters are used not only in Diseases with matter, for Humours contained in the Veins, but in Diseases without matter, for altering and strengthening.

IX. Some will have them warmed, lest they offend the Stomach and Bowels with their coldness: but experience teaches that many thousands drink your *Acidulæ* cold without any prejudice. Yea they ought not to be heated, because thereby they be-

come white, frothy, turbid, and some of them red, whence is intimated a loss of their virtue by evocation of their Spirits, which also happens to other Liquors, as Wine, &c. 2. being drunk lukewarm they loose the tone of the Stomach and are vomited up. Yet lest by their coldness they should offend an empty Stomach, being taken out of the Well let them be held a little in ones hand in a closed Vessel, that by that means they may lose somewhat of their coldness; and let them be swallowed leisurely, that as they descend into the Stomach, they may be a little warmed by the parts they pass through, viz. the Mouth and Gullet.

Idem, p. 583.

X. If the Waters altogether stagnate or abide in the Body, as it happens to some, what is to be done? Answer, there are divers receptacles of the Water in such cases: If therefore they stay in the Intestines, which is known by rumbling of the Belly, by belching, by tension and weight of the abdomen, then on the same day inject a Clyster of the same water with an ounce or two of *hiera picra*, or of *hiera Logadii* or also of *hiera diacolocynthidis*, and so you shall bring the water all away: But if this succeed not, then try a sharper Clyster, and the day following administer some purger of the Phlegm that has hindered the passage of the Waters, and do this for two or three dayes together if it be necessary, omitting in the mean time the use of the Waters. But if the Water be retained in the Veins, which is known by the absence of belching, and of rumbling and swelling of the Belly, let the Body be purged the next day (for the absence of pain presses not for a Clyster on that day) with Pills of *hiera* with *agarick*, or with *Pil. Aloëphangine* being taken to three scruples and an half, and afterwards procure sweating: If these Pills bring not away the Water, *Fallopins* advises to add a grain or two of *Elaterium* to one Dose of the said Pills. Yea *Fallopins* was wont, for the making of the Mineral Waters pass, to give something of *Elaterium* first, and after that the Water, with very good success.

Heer, p. 149.

XI. The English upon drinking the Waters presently smoke a pipe of *Tabaco*, which I do not disallow; but it would do better if by holding their Breath they kept the smoke longer in their Mouth, and did not so quickly puff it out: For none can doubt, but the fiery smoke of *Tabaco*, when there is no other passage granted it, by descending into the Stomach must heat the Waters, and so hasten the pissing or exit of them.

Idem, p. 130.

XII. I have seen some go to bed about two hours after they have drunk the Waters, covering themselves warm, and thereby to have procured a very quick passage for them: yea very many have found this means more available than any other exercise.

Idem, p. 121.

XIII. After drinking the Water the Body is to be exercised some way, or one must return home, which it will be better to do on Horse-back or in a Coach than on Foot, as certain experience teaches. For besides that such as travel on Foot, are apt to sweat, and so the Serum being diverted another way will flow more sparingly by Urine; sitting upon an Horse or in a Coach compresses the Muscles of the Belly and the Intestines, yea and the Stomach it self, and agitates the Body more strongly, whence the Waters being sooner heated are readier pisset out, as will be most clear to any one that shall try it.

Idem, p. 122.

XIV. He that will provide well for his Health, must take a Purge once in eight, ten or twelve dayes, drinking no water for that day: for thus the waters will pass more freely, and the whole puddle of Humours being washt away, the Body will be left most sound: Let Physicians therefore give this direction to their Patients.

Idem, p. 100.

XV.

XV. *Socrates* said, that the hour for rich men to dine is when they will, and for the poor when they have wherewith: Here we must dine when all or the greatest part of the water is emptied either into the Close-stool or Chamber-pot. But because some, especially on the first days, evacuate but little, or it may be but half the water, that they may not hurt themselves by deferring dinner too long, let them take this for a sign when they may conveniently dine: If any one upon drinking the waters make some white Urine, as all use to do, and after, that which is coloured, let him dine securely, for it is certain that the remainder of the water that is contained in his Body, is retained for some other use by Nature which is the dispenser of what is taken: or however when for about two hours he has ceased to piss, or to go to stool, if the water work that way, he need not fear but he may dine safely. Let him sup when his Appetite or his reason judges that his dinner is concocted.

Idem. p. 150.

XVI. There is nothing worse for those that drink the waters than sleeping at Noon, for it hinders their Operation, (seeing it dulls their nature, whose office it is, after a good digestion is made, to expell superfluities) and also shuts up the humours that ought to be thrown out of the Body, in some part where they putresce. Besides, this sleep ought rather to be ascribed to mineral vapors than to Nature, so that it dulls the head, heats the body, and hence causes fluxions. Moreover seeing it is short, and therefore presently ceases to promote the concoction of the Stomach, when they are awaked, the meat comes to float through the Belly; and the bile, which is wont to be moved outward at that time, is revoked inward by this sleep, where being collected it may cause a Fever, or if it stay long, be excocted into a Melancholick juice. Lastly there must needs be caused by this sleep contrary motions of the juices in the Body, viz. by the day-light which calls them out, and by the sleep that recalls them inwards. But if any (as many of the *Italians*) have much used himself to Noon-sleep, because there is little or no passion from things that one is accustomed to, let him attribute something to his custom, and sitting upright in a Chair, but not lying along on a Bed, let him rather slumber than sleep.

Idem. p. 132.

XVII. Towards Evening before Supper many say that the Waters are to be drunk again, but only in half the quantity that was taken in the Morning: but I have seldom seen that drinking them at this time has done any one good: Therefore unless one have an extraordinary strong Stomach, let him drink little or none before Supper, unless perhaps it be to quench his thirst.

Idem. p. 133.

XVIII. It often happens that while Women are drinking the Waters, their Terms supervene, and yet they think they ought to persist: But we think they ought rather to forbear, 1. Because the waters provoke the Terms, whence there is fear that the flux should become immoderate and not to be stoppt, especially in those who have large Vessels and much and thin Blood: and 2. Because no necessity presses that two evacuations should be attempted at the same time, and your *acidulae* for the most part evacuate either by stool or Urine.

XIX. Although your *Acidulae* dry, yet there is no reason for the debarring of emaciated People from the use of them, for fear their Soul, which is seated in heat and moisture, should be expelled: for we have seen the driest persons and such as have seem'd to be almost without Blood (rather living Carcases than men) to become fleshy and in good plight by the use of these Waters: namely the obstruction of the Mesaraicks and Liver being removed and the Stomach strengthened, better chyle has been transmitted to the Veins, whereby they have been

replenished with good Blood, which soon filled the Muscles with flesh.

Heer, de acid Spadai p. 28. 66.

XX. They whose Stomach has wholly lost its oeconomy; They who cannot warm the Waters either by their natural heat or by such as is acquired by Medicines; They whose vital Parts are almost extinguish'd; who have a long time labour'd under shortness of Breath; whose Breast is distended with a dropie of the Lungs; who (if they be adult) cannot bear about eighty ounces of Water; let none such come to the *Spaw* waters, unless they would go worse away than they came, or be buried there. Such as come, having invoked God and consulted the Physician, having left cares at home, and with a serene mind being intent only upon their health, let them betimes in the Morning, but the Sun being first up, (when they have clear'd their Body of its excrements through all the passages) drink as much water as they can, so their Stomach be not oppress'd: let them evacuate by Urine or Stool what they have drunk: when they have evacuated the greatest part, let them dine: after dinner let them drive away sleep by play, walking, &c. let them sup sparingly: taking a short walk after Supper let them go betimes to Bed: and let them follow this course of Life, till the Physician shall advise them to depart.

Heer. Spadai p. 139.

XXI. Some Chymists promise a certain compendium of your *Acidulae*, and pretend that they can do as much by a certain salt powder given to a few grains, believing that the Stomach is offended by the great quantity of water, which a little powder cannot do. But this is a mistake; for this is the prerogative of mineral waters, that they do not offend the Stomach though taken in a large quantity; in the mean time they pass through all the Vessels, and whatsoever vitious matter they meet with, they wash and cleanse it away, which a few grains of any salt powder cannot do, if one consider the great number of Mesaraick Vessels, to which a few grains bear no proportion, so as that the salt should be distributed to them all: to say nothing of that singular mixture that is made by Nature, which Art cannot imitate; and that the virtue is not seated so much in any fixt salt as in a volatile Spirit, which easily vanishes. Nor must we rashly pass judgment of the qualities of these Waters: for if we see that they consist of (*v. g.*) Alum, Sulphur, Iron, Nitre, &c. we must not presently conclude, Therefore they have the same virtues with the Minerals they consist of. For according to *Hippocrates*, lib. de vet. medic. In Man (and other Mixts) there is bitter, salt, acid, inspid, which being mixt and temper'd are neither discerned nor offend: But when any one of these shall be separated and exist by it self, then it both becomes conspicuous and affects a Man, and so obtains another virtue of affecting. Hence gather that the qualities of Mineral Waters are to be enquired after by experience rather than by reason; and that they are an Empirical Medicine whereby divers and contrary Distempers are cured. See an example of artificial *Acidulae* in *Platerus's* Observations lib. 3. p. 610. where he sayes, that some mix Spirit of Vitriol with *Acidulae*, that they may acquire an acidity, but I have observed that that has prov'd prejudicial to many. *Willis* sayes that he can make Artificial as effectual and grateful as the Natural.

Sennertus, pract. l. 3. part. 5. sect. 1. cap. 6.

XXII. It is the opinion of some, that it is convenient to boil Victuals in Mineral Waters; but I do not approve of it, 1. because the use of Medicaments ought not to be continual, for by that means they become so familiar to Nature that they will effect little. 2. Nature is not perpetually to be tir'd with Medicines, but at Dinner and Supper time to be refresh'd with mere aliments, that she may endure the cure which is sometimes wont to last three, four or five Weeks. 3. Medicaments do infect aliments: and these on the other hand

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dull the vertue of those. 4. Mineral Waters do in no wise pass into the nourishment of the Body, and therefore if they should be detained too long by the Food, they would be corrupted, for through the thinness and purity of their substance, they are easily alter'd. 5. If Viduals should be boil'd in the Waters, it should either be for profit, but then they would have but little vertue; or for necessity, but if they be drank twice aday, they are taken in a quantity sufficient either for evacuation or alteration; or lastly for pleasure, but so by boiling they lose their grateful taste, &c.

Scab. p. 617.

XXIII. Your Mineral waters, commonly called *Acidulae*, for the most part are wont to spring from a mixture of the Spirit of Vitriol, sal Nitre and Alum (which Minerals are indeed sometimes found simple, but more often mixt more or less with other Minerals in the Bowels of the Earth, especially with Iron.) There is great plenty of these Springs in divers Countreys, in those especially that abound with Iron Mines: Germany alone affords near a thousand, as *Bernhard Varenius* affirms in his *Geograph. general.* cap. 17. lib. 1. But in Britain the more Famous are those of *Barnet, Epsom, Tunbridge, Astrep, Scarborough*, and that which springs out of *S. Vincent's Rock* near *Bristol*. And the excellent vertues of these *Acidulae* both in reducing the over-fervent Blood to a just temper, and also in cleansing it gently from Sulphureo-saline impurities both by Urine and Perspiration, yea, and in opening obstructions of the Bowels, are so well known not to Physicians only, but also to the unlearned multitude, that they need not be published by me. Nor need I stand in prescribing rules in the due use of them; for that is done by others. But I think good to intimate this in general, that the Dose is to be increas'd or lessen'd daily according to the quicker or slower passage of the Waters, observing a due regimen in the mean time both in Diet and Exercise: and that a longer or shorter time is to be spent in drinking the *Acidulae*, according to the greater or lesser Euphory and emolument of the drinker.

Gualt.

Charlton. de Scorb. p. 184.

Astringents.

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THE Universal and common Indicant for Astringition is the looseness of the solid Parts, chiefly, and next of the moist; or in particular, 1. The looseness of the *Parietes, Walls* or *Sides* of the Parts; hence Astringents are convenient in strengthening the Bowels when they are too loose, and hence they are called, and are, *Tonicks*: So Astringents also conduce to the moderating of the consistence of the Blood, and resisting of Putrefaction; whence many of them are also *Alexipharmacks*: For the essence of malignant Diseases, especially the Plague, seems to consist in the resolution of the Blood, when its consistence is so perverted, that it is not sufficient

for vital actions, but the Serum and Blood are parted: of which sort are both Acids, and mucilaginous precipitants, and also Balsamick diaphoreticks. 2. The rarity of the Pores. 3. The mobility of the humors. 4. The solution of the unity of the Membranes and Vessels. 5. The consequent eruption of the humors, sometimes of the Blood and Serum. Now astringents, that are owing to these Indicants, are of divers kinds, which although they all agree in uno tertio, and intend one and the same end, yet as *Galen* notes, 3. de sang. miss. c. 15. this or that Astringent Medicine, besides its astringition, has several other qualities, and therefore cannot obtain altogether the same effect; or, Different effects are observed to proceed from different Astringents: For that which astringes, besides astringition is either Acrimonious, or Fat, or Sweet, or Bitter, or Salt, or Acid; whereby is manifestly intimated what difference there is in the choice of Astringents for this or the other purpose. In general, Astringents are cold and dry; and, according to *Cartes*, their vertue consists in a certain thickness and figure of Parts, whereby they constringe the Parts of another Body like a wedge, or twine them like Fiddle-strings. Therefore the active principles, Salt, Sulphur and Mercury, are less vigorous in them, or at least are immersed in earthy Parts, and as it were fixed. And they are either 1. Earthy, drying and absorbing, which astringe with biting, as *bolus Arm.* Corals, *lapis hematites*, *terra sigillata*, Chalk, *crocus Martis*, &c. or 2. Sour and Austere, as *Bistort*, *Tormentil*, Alum, Vitriol, &c. which abound with an astringing austere Salt, either vegetable or metallick, with earthy Parts; or 3. Acid, as Vinegar, the spirit of Vitriol, Simple and Martial: of which we must note, first, that acid Astringents are more proper for fluxil Humors, both in the Vessels and out of them, which they coagulate as it were and fasten; but not so proper for the Pores and Parietes, whence they are convenient inwardly in Hemorrhagies, as suppos'd of the Nose; Thus we have cured Scorbutil Hemorrhagies with Spirit of Vitriol, in regard Acids do in this manner coagulate the fluid Blood: but Acids are not so convenient for the Pores or Parietes rather, for coming thither they incide, dilate, and exasperate the humors the more. Secondly, therefore we must not always rely on acid Astringents, for they do not so constringe the Pores as do austere, lowr, and other stypticks, but they are withal indued with a thinness of Parts: whence those that use to give Acids in dysenteries, diarrhoeas, spitting of Blood, and wheresoever the Pores of the Parts or the Membranes are affected as to their substance, can seldom boast of any good effect. Or 4. They are Emplastick, whether oleous, which obstruct the Pores, or gummos, mucilaginous, viscid, and emplastick properly so called, as Gum Arabick, *sanguis draconis*, Mastic and *Farina*, or Flowers. 5. Some also are sweet, as Chestnuts; some bitter, as Aloes, &c. Or 6. Balsamick withal, being endued with a Sulphur immersed in terrene Parts, whether implicitly, another quality predominating, whence Medicines properly called cold are also astringent, as galls, acacia, Pomegranate rinds, &c. or explicitly, as Aloes, (which used outwardly astringes) Myrrhe, Nutmeg, the rind of Frankinsence, Cinamon, which latter indeed are hot and joyned with Acrimony, yet through their manner of substance, (in regard it has both an Emplastick vertue and drying earthy Parts) they are astringent (so the caput mortuum from the distillation of Cinamon-water powerfully astringes) but they are commonly improperly called so; for they are either not used inwardly for astringing, as Aloes; or they benefit by strengthening the heat withal, and also confirming the Parietes, on which account Nutmeg stays vomiting. Or 7. They are Escharoticks, which do not properly astringe any more than the

the former, but inasmuch as they consume the flowing humor, and induce a Crust upon the Parts, they come to leave an astringent behind them, even as Fire is used to stop the hemorrhagies of the Vessels in the cutting off of Limbs; so Lime, Spirit of Vitriol and Vinegar have place in some cases. Or 8. they are *Ergents*, such as are Narcotics and Opiats.

II. Medicines made of *Mars* (Steel or Iron) are of a middle Nature, and are used both for opening and binding. But note, that such of them as are more vitriolated, and have the metallick Salt more explicit, open more; and such as are more terrene and changed into ochre, bind more.

III. Internal Astringents must be agreeable both to the Parts for which they are designed, and also to the humors and cause; for some are more proper than others: Thus *Aromatick* astringents are more agreeable to the Stomach, as Nutmeg, Treacle, &c. Which if they be not to be used alone, are at least to be mixed with others: For it is most true, that *Aromatick* astringents are better for the Stomach, and therefore for *diarrheas*, dysenteries, and vomitings. *Acids* also are more agreeable to the Stomach; for Vinegar is good for the Stomach both to foment it withal and to drink, unless there be some erosion in it or in the Intestines, yet even then *Acids* are good outwardly. In Diseases of the Lungs, *Resolvers* are to be mixt with them; of the Liver, penetrating *Acids*; of the Head, *Balsamicks*: So if the matter be too Fluxile and Acrimonious, Mucilaginous Astringents are more proper; if malignant, as in an Epidemick dysentery, Bezoardicks are to be added, or Astringents endued with that quality are to be chosen, as *Tormentil*, *Terra Lemnia*, &c. So if there be an acrimony of the humors, and a strong irritation of the membranous Parts, fixers are to be mixed with astringents; for in this Case both these being mixed together perform that more happily which one could expect from either of them alone: So, for example, Opiats do indeed stop *Diarrheas* and dysenteries, and Astringents left to themselves stop the same; but seeing Opiats do more fix the humors, and Astringents more defend the *Parietes* of the irritated Parts, hence *Laudanum Opiatum* mixt with a *Styptic Powder* is of greater efficacy because it attends both, and so fulfills the intention the more happily: Where the Parts are to be defended, the terrene profit more.

IV. We must never astringe too much, lest the Pores subside too much, and by that means can hardly be relaxed: Hence also in a Dysentery, for example, from the too great use of Astringents there often arises anxiety, dangerous Ulcers, &c. for Fluxes often require rather to be moderated than stoppt, and all things are to be done according to nature's direction; wherefore *Aromatick Resolvers*, or Openers are profitably mixed with Astringents.

V. In Diseases of the Breast in general we must astringe sparingly; both because the tone of the Lungs rejoices in laxity, and also because the viscid, hot or bilious Matter may easily be expelled to the heart because of its vicinity: hence they are not good in a *squeaking small voice*, straitness of the Breast, difficulty of Breathing and Asthma, Inflammation of the Lungs, or Pleurisy; For they incrassate the humors the more, fasten them in the Part, and make them unfit for expectoration, yea bring on a suffocation.

VI. There are no astringent Clysters properly so called, because all moisture injected into the straight gut, as being strange to it, irritates it, even water itself: yet they are called astringent, and those are prescribed which by a certain mucilage restore the mucus of the intestines that was fretted off, and are made of milk, Deer-suet, &c. such as

Minderus chiefly commends: yet even this way they dilute and temperate rather than astringe.

VII. In some Cases though the Flux cease, and so likewise the mobility and eruption of the humors; yet astringents are so far from benefiting, that they rather hurt; for instance, the immoderate flux of the Terms, especially in the hypochondriacal, is often caused from an obstruction of the Vessels, whereby the Blood cannot circulate freely, whence Nature being burthen'd seeks other ways for the passage of the Blood. In like manner when the same immoderate Flux is from plenty of Blood, there astringents profit not: There is an Inducant indeed for astringent, but this is the last thing, or the end; but he that will attain the end must also attend the means, and so in that case Aperiatives are rather proper. So also in Hydropick and cachectick Persons bleeding at the Nose is very frequent, in whom the Spleen or Liver are affected; in which case Medicines that strengthen the Bowels are requisite indeed, but the more chief intention is to open the Parts obstructed; and therefore let it be noted as a rule, When with an afflux of humors, there is present either an obstruction of the Vessels or a plenty of humors, astringents do less good, but rather in the first case Aperiatives, and in the latter Evacuators, as blood-letting.

VIII. As it is well known that *crocus Martis* is either aperitive, or astringent; so we must never perfectly rely on *crocus Martis astringens* alone: for first it is certain that these two differ not, save that in the Astringent a more earthy, absorbing and constringing quality predominates, and in the aperient a more saline vitriolate, which in the former is more changed and taken away by the most urgent Fire of the Reverberatory: Hence in case Acid, Austere or fowr humors excite Tumults and Fluxions in the Body, as is usual, or *Diarrheas* from an overloose Tone, by the accession of these humors in the Body, part of the *crocus* recombines as it were, and so loosens as much as it astringes. Whence where the villi of the viscera are to be strengthened, it profits much, inasmuch as it exerts its vertue in opening, as they call it, or in correcting the less fluxile humors; but where there is looseness with erosion, (for instance) we must deal warily with it: But the less vitriolate *crocus Martis* is, the less aperitive it is; and the less ochreous, the less astringent: whence we must not alike absolutely trust to *Mars* alone, to all oits, and always.

IX. The roots of Bistort (or Snakeweed) and Tormentil have a great affinity: but we must note, that seeing the Roots of this latter are of more thin Parts than those of Bistort, we must always prefer Tormentil where less astringent is required, as in the beginning of a malignant Dysentery: Moreover Tormentil is given with very great benefit in malignant Fevers, as the small-Pox, Measles, *Petechiae*, yea in the Plague, and Epidemick Dysentery, not because it moves Sweat, but that it may bridle the ebullition of the mass of blood: which is the reason also, why the Roots of Tormentil enter the composition of the *pulvis Pannonicus ruber*.

G. W. Wedel.
delius de fusi.
fac. p. 33.

Wedel.
Pharm. p. 113.

Erid. Hof.
man clavis
Schrod. p.
423.

Alexiphar.

Alexipharmacks, Cordials, Diaphoreticks.

(See Sudorificks below in this Book, and Venena or Poysons in the eighteenth.)

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 Let the Gellies of Hartshorn, Ivory, &c. be new. XXVI.

THose are reckoned for Cordials that assist the Heart labouring in any kind; wherefore one is every where said by Authors, notably to strengthen the Heart; another to keep it unhurt by any putrefaction; others to relieve a weak oppressed heart, to cure its tremor or fainting, and to preserve it from corruption. Moreover because in the Plague, small Pox, and malignant Fevers the Heart is believed to be seized or beset with Poyson or Malignity, therefore the remedies that are wont to help in those Diseases, are not called simply Cordials, but Alexeteries and Alexipharmacks. This opinion concerning both Cordial and Alexeterial Medicines, seems to rise from hence, inasmuch as the Heart is commonly believed to be the beginning of all Life and Heat, and that therefore our Health and Death depend on its immediate affection: hence what things soever recreate the Soul, they are supposed to do it as they are benign and friendly to the Heart. But seeing we have in another place shewn largely enough, that the subject of life is not the heart, but chiefly and almost only the Blood, and that the Soul it self (on whose existence and action in the Body life depends) is founded partly in the Blood and partly in the animal Spirits, it will plainly follow, that the remedies which preserve Life intire, or recruit it when it is in danger, respect these Parts of the Soul, (viz. the Blood and animal Spirits) rather and more immediately than the Heart.

Therefore that the Reasons and Manners of the Operation of those Medicines that are called Cordials may be known, we must consider these two things, 1. How many and what ways especially, the Blood, being amiss or in danger as to its accension, or its mixture, requires aid from Medicine, whereby it may be preserved or amended. 2. After what manner the Heart is hindered or perverted from its due motion (for it serves to drive the Blood about) through the defect or fault of the animal Regiment, and for which, Medicines that encrease or set to rights the Spirits, are indicated.

As to the first, the Blood in respect of its accension, either fails or exceeds, and in each respect different Medicines, namely hot or cold, or as it were Oil and Water, are required; and therefore they are commonly called Cordials, though they affect not the Heart at all: for though upon the taking of them the motion of the Heart is often changed, and accordingly the Pulse becomes presently frequenter or slower, stronger or weaker; yet this therefore comes to pass, because the motion of the Heart, depending altogether on the influx of the animal Spirits (by a wonderful consent and co-action betwixt each Portion of the Soul) is most exactly proportioned according to the accension of the Blood: Wherefore accordingly as the Blood doth intend or remit its effervescency or *astus* by the Medicines that are taken; presently the animal Spirits, that move the Heart, exactly obeying its condition, cause the Heart to beat more quickly or slowly; and also if the animal Spirits be affected by the same Medicine, the Pulse is likewise on that account rendred more or less strong or vehement, whilst in the mean time the vertue of that Medicine reaches no more to the Heart it self, than to the Hands or Feet, or any other Muscle. Therefore that the first rank of Cordials, whereby the Enormities of the Blood are cured, may be rightly ordered, it will be fitting to consider, how many and by what ways its liquor, both as to its accension and its *Crafs* or mixture, is wont to be perverted or depraved; and moreover what sort of Medicines, vulgarly reputed Cordials, are required for each of its disorders.

First therefore the Blood is sometimes not accended enough, nor circulated with vigour, as we may observe in many languishing People, namely, such as lie long Sick, or have suffer'd great Hemorrhagies or other immoderate Evacuations, or are worn out with old Age, who namely together with a weak Pulse and decayed Strength, have their extreme Parts for the most part cold and pale; the reason whereof is, because the Blood is become almost yappid and effete through the too great waiting and depression of the Sulphureous Particles; and therefore it is accended very sparingly in the Lungs: To which is often added, that the animal Regiment failing also, the Heart being destitute of a plentiful influx of Spirits, does not enough exagitate the Blood, that it may effervesce and be accended the more briskly. The Remedies to be used in this case are generous Wines, Strong or Burning Waters, or such as are more mild, distill'd with Spices (or *Aromata*) Aromatick Powders, Species and Confections, Chymical Oils and Spirits, Tinctures, Elixirs, and other things endued with sulphureous and spirituous Particles; to wit, such as may exagitate the Blood more, and make it more inflammable and turgid; and seeing the same do withal exsuscitate and comfort the animal Spirits, they therefore make the Heart beat more briskly and strongly.

Secondly, The Blood through its sulphureous Particles being too much loosed and driven into a fervor, is often too much accended, and disperses an over-intense and very troublesome heat through the whole Body: wherefore that it, being so much rarefied and flagrant, may be kept within the Vessels, and also eventilated, the Heart beating vehemently and quickly,

quickly, drives the Blood about with great labour and endeavour: Therefore in this case cold and attemperating Cordials are to be used, which may bridle and allay the fervour of the Blood, and also kindly recruit the animal Spirits, that they may now perform the more difficult tasks of life: For which ends the distilled Waters of Borage, &c. the juices of Sorrel, Citron, &c. are wont to be used, to which Opiats are often added with profit, for the *impetus* of the Heart being a little bridled, the Blood does more happily and sooner remit its effervescence.

But the Blood is not only depraved and perverted as to its too much or too little accension, but diversely also through its *Crisis* or mixture: Nor are Cordials presently requisite in all its Dyscrasies, but only in those which being excited in Fevers, seeing they are sudden and outrageous, threaten a total Corruption to the mass of Blood.

The Blood effervescing feverishly is in danger as to its *Crisis* two ways chiefly; namely, 1. Either the Band of the mixture is too strait, so that all the Particles are so complicated and combin'd with one another, that the Excrementitious cannot be extricated from the Profitable, and the thin from the thick, as it happens in some continual and putrid Fevers, which although they be but little or not at all Malignant, yet because they can have no *Crisis* either by Sweat or Perspiration, sometimes end in Death. Or, 2. The Blood in Fevers has its *Crisis* perverted the contrary way, namely, by a too great Laxity of its Particles, in which case Cordials of another sort, viz. Alexipharmacks, are required. For it often happens that its *Compages* is too much loosened and pulled asunder as to its *Crisis*, by heterogeneous Particles, either bred within it self, or pour'd into it from somewhere else, so that the common band of its mixture being dissolved, its Parts every where fall asunder; and then the Portions of the coagulated, extravasated or stagnating Blood being fixed here and there putrefie and are corrupted, and at length the whole mass is so much vitiated, that it is no longer fit for continuing the vital Flame, or for extilling the animal Spirits into the Brain: wherefore all the Functions must then needs flag by degrees, and life perish at last. The Cordials requisite in this case must consist of such Particles, as being conveyed into the Blood and circulated with it, persist still unconquered, but yet are withal benign; which while they enter into all the Pores and Passages of the mass of Blood, do everywhere exagitate the other malignant Particles, pull them from their Concretions, and at length either subdue them, or drive them forth: by which means the Blood being freed from its poisonous mixture, and withal from all its private Coagulations, and being again divided into its smallest and elementary Particles, recovers in short time its former salutiferous mixture. Moreover that it may appear more plainly in what manner Alexeteries preserve the Blood and Juices of our Body from (*effatus*, or) taints, or free them from corruption when they are already touched therewith, we must consider how other Liquors that are liable to Putrefaction are preserved, or when they are seiz'd upon thereby may be restored: Therefore concerning Beer we may observe, that being of its own nature soon apt to grow sour, it is made durable by boiling Hops in it: likewise that common Water, which otherwise would soon putrefie, continues a great while unalter'd by boiling, or infusing bitter Vegetables in it (of which sort there are also Alexipharmacks.) Moreover, that the juices of Herbs, and some other Liquors being already grown musty, if they be smoak'd by burning of Sulphur, recover their former vigour: Besides, that Wine, Beer, and other kinds of Drink being grown almost dead and good for nothing, do often revive by exciting a fermentation in them anew. The reason whereof

is, that seeing the corruption of any thing consists in the exsolution of the elementary Particles; and in their departing from one another, whatsoever detains them in motion and perfect mixture while they tend to flight and confusion, preserves that Concrete, so long, safe, and sound: Moreover if any thing do again bring together the Elements that were loos'd and going to depart from one another, and rouses them into a new fermentation, it drives Putrefaction from the Concrete, although already begun, and procures a firm concretion to it again. That such alterations and freeings from corruption can be performed on Liquors made by Art, every one knows: and indeed in the Plague and malignant Diseases Alexipharmacks seem to perform the same Effect: for these being taken often, inasmuch as they exagitate the Blood continually, and drive it into an higher ferment, notwithstanding the influence of the hurtful (*inasmata* or) impurities, they conserve its mixture intire: yea, after the malignity has made impression, and the *Crisis* of the Blood begins to be loosened and dissolved in the manner aforesaid, such Remedies being still exhibited for promoting Sweat or Perspiration; inasmuch as they decoct the impurities of the received taint, and induce a new fermentation opposite to the other corruptive one, they often deface the *Impetus* or impressions of the pestiferous Malady.

As to the Cordials by which the too strait *Compages* of the effervescing Blood is loosened, and opened for the setting at liberty the febrile Matter and other Recrements, those are of affinity with some Diureticks and Diaphoreticks, yea, sometimes they are of common or reciprocal use, inasmuch as the vitiated *Crisis* of the Blood sometimes cannot be relieved, unless its *Compages* being first unlocked there lie open an *exit* for discharging the Serum by the Reins or the Pores of the Skin. Saline Medicines do chiefly execute all these intentions of Cure; for, as we have elsewhere noted, the opening of any Body whether liquid or solid, is hardly performed but by a Saline key: For commonly all concretion or compaction is from a Salt of one sort, and the dissolution from some of another sort, that snatches into its embraces the first Salt: and then Precipitation is caused by some Salt of a different condition, that destroys the Combinations of the former. Therefore we reckon Salines among Cordials no less than among Diureticks and Diaphoreticks, because there is the same reason in all. In the first rank Cordials endued with a volatile Salt offer themselves, and are justly preferable to all other, as the Spirit of Hartshorn, of Blood, of *Sal armoniacum* compound, viz. distilled with Amber, Treacle, and other Alexeteries, the Spirit of Skulls digged out of Graves: Hither may be referred also the Salt of Vipers, the Powder of Toads closely calcin'd (which I have known famous and very profitable in an Epidemick Pestilential Fever.) Such Remedies as these have recalled many from the very jaws of Death, and indeed afford help often in a various and manifold respect; namely, first, inasmuch as encountering either a fixt or an acid Salt, and snatching them into their embraces, they open the mass of Blood, too much thickned and straitned by the febrile effervescence, and so promote the Separation and Secretion of the Morbifick Matter: And secondly, in that they relieve the animal Spirits, and rouse them up from their sluggishness to execute their Office: to which may be added, that in Malignant Fevers these Medicines subdue, and often extinguish the poisonous Particles of the Morbifick Matter. The Second place among *Saline Cordials* is of right owing to Remedies endued with an *alkalifate* or petrifying Salt; for these are commonly reputed very notable Cordials: Of this sort, namely, are the Bezoar Stone, Perles, Corals, the Bone of a Stag's heart, and the Horn of the same, the Powder of Ivory, the Eyes

and

and Claws of Crabs, and other Powders of Stones and Shells, which common Experience witnesseth to be often given with benefit: And the reason of their helping seems to consist in this, That the Particles of the Alkaline Salt in the Medicine, encounter the Particles of the acid Salt within our Bodies, and by and by do intimately cohere therewith, and therefore destroy the ragings or whatsoever other undue combinations thereof: To this *Classis* of Cordials are Bole-Armene, *terra Lemnia*, *Sigillata*, and other chalky Medicines deservedly reckoned; but not upon the account that they succour the labouring Heart (as is vulgarly thought) but because they destroy the Predominances of an acid, or fixed Salt, either in the Bowels, or in the mass of Blood, and by and by allay and correct the Enormities produced thereby. *Thirdly*, If I should exclude *Acetous Medicines*, or such as are endued with a fluid Salt, from this list of Cordials; every one almost would tax me; for these are esteemed by most to be notable Alexiteries against the Pestilence. Wherefore in the cure of Malignant Fevers Treacle, and Bezoartick Vinegars are highly cryed up; yea, Vinegar or Acetous things are usual Ingredients in Waters distill'd for that use: for the same reason Spirit of Vitriol, the juice of Citron, Sorrel, Pomegranats, &c. are reckoned for Cordials and Alexiteries, and that indeed justly, because these do excellently dissolve the Combinations of fixed Salt with adust Sulphur, and master their outrages; and therefore by such Remedies as these the Coagulations and Extravafations of the Blood, that use to happen in Malignant Fevers, are often prevented or cured. *Fourthly*, for the same Reasons for which the aforesaid Saline Medicines are reckoned for Cordials, others also whose basis is a fixt Salt, are reputed such, or are put into their Compositions: For seeing Salts of divers sorts are bred in our Body, and they commonly pass from one state to another, hence not one kind of Salt, but Salts of different kinds ought to be given according as the intention is. On what account Medicines endued with a fixt or lixivial Salt do take away or correct the Enormities of an acid Salt predominating within the Bowels or Blood, was shewn above. *Fifthly*, A Nitrous Salt is justly numbred among Cordials, as without whose Particles, to be inspired with the Air (in taking our breath) the life of Animals cannot subsist: but this being taken in at the Mouth (as a Medicine) is accounted a famous Antipyretick, in that it takes away Thirst and bridles the febrile Heat; which yet it does, not only by helping the mixture of the Blood, but also its accension: for we think, that Nitrous Particles, together with Sulphureous, are requisite to constitute a flame, and the more of the Nitrous there are, the clearer and brighter the flame is. Wherefore seeing a Matter, which for the greatest part consists of Sulphur with Salt and Earth mixed, being kindled sends forth but an obscure flame; and such as is vitiated with Smoke and Soot; but if Nitre be added, burns clear and calm with brightness: We think 'tis just thus in Fevers, when the Blood being filled with adust Feculencies smokes with a suffocating heat rather than burns out, Nitrous Particles being taken in at the Mouth and transmitted to the Blood, make it by and by to burn brighter and clearer; so that the *Compages* of the Liquor being unlocked, both its serous and fuliginous recrements part the freelier from it.

But moreover some Medicines have the name of Cordials, because they exert their virtue on the animal Spirits first, and more immediately than upon the Blood, and so erect, vigorate and compose either some Portion, or the whole subsistence of the sensitive Soul that was too contracted, depressed or otherwise disturbed. And indeed this kind of Remedies do in a sort affect the heart it self, although remotely; in that, seeing the whole sensi-

tive Soul is elevated, and expanded wider by giving of them, the Spirits also that are appointed for the *Præcordia*, flow the more plentifully into them and actuate them the more briskly: and therefore the Pulse that before was weak or faltering, by and by beats more strongly, and the Blood is driven about with the greater violence. This sort of Medicines are fitly enough reduced to two Heads, and as they are gentle or rugged, attain the same scope; namely, they either erect and confirm the animal Spirits by cherishing, and as it were gently and softly stroaking of them; or else by vexing and as it were spurring of them, they drive them into quicker and sometimes more regular Motions. The Cordials of the first sort, as soon as they are swallowed, nay, sometimes being but tasted, exert their Virtue, and by a grateful appulse recruit the Spirits that reside in the first ways; then by the continuity of these the same ovation being communicated successively to the other Spirits, shortly undulates through the whole *Compages* of the sensitive Soul; so that both the Brain, and also the *Præcordia* being irradiated with a fuller influx of the Spirits exulting as it were, they perform their Functions more briskly and cheerfully. For this purpose (taking heed of the too great incitation of the Blood) serve the Waters commonly called Cordial, also the Preparations of Mosch and Amber, and the Aromatick Powders that are mixt with them: Such things as have a grateful favour or smell, or are pleasant to look upon, inasmuch as they recreate the animal Spirits, are reckoned also among Cordials. In the mean time other Cordials of this *Classis*, the first ways and mass of Blood being almost untoucht, seem to operate first of all in the Brain, of which sort are some Cephalicks so called, which though they be less grateful to the Palate or Stomach, and hardly ferment or exagitate the Blood, yet illustrate the Brain, and exacuate and strengthen the Inhabitants thereof, the animal Spirits. Of this Nature seem to be Sage, Betony, Rosemary, Vervain, &c. There are another sort of Cordials, that operate in a different manner, and help wholly on another account; those namely do not gently cherish the animal Spirits, and cause them to be expanded equally, but rather irritate them, and make them run and be carried this way and that way: to the end namely, that they being inordinate before and unequally dispersed, crowding in some places, and thin in others, and therefore intermitting or perversely acting some offices of their Functions, especially within the Brain or *Præcordia*, may be disturbed and more agitated by an ungrateful Medicine; which in such a case is a very good Remedy, in that being thereby roused, as if they were lath'd, they leave their former disorders, and of their own accord return into regular order. Thus it is usual in swooning, fainting, oppression or spasm of the Heart, and in almost any other failings, languors or irregularities of the Spirits, to give inwardly Spirit of Hartshorn, of Soot, of Sal Armoniack, or Tincture of Castor or *Asa fatida* with other Liquors; or to hold to the Nose these, and the like, as especially volatile Salts and Emphyreumatical Chymical Oils: Besides it may be sometimes good in sudden Defections of the Soul to sprinkle cold water on the Face, to pinch the Nose, very much to shake the Body, and sometimes to strike a box on the Ear. Such Administrations as these give help, inasmuch as they rouse up the animal Spirits being oppressed, or distracted, or employed otherways than they should, and command them (being expanded, and mustered as it were) to their former usual Offices.

II. Seeing in almost all Diseases diminution of Strength, as being more urgent, draws to it self a curative Indication, and persuades that before all things roborating and comforting things should be given the Sick; 'tis no wonder that Physicians are often intigated to appoint such: But if you inquire of them

them what those comforting things are? they produce divers Blandiments of the Tongue, Confections and Aromatick Spirits, never regarding whether they be hurtful to the Patient or not: nor understanding that these things that please the Palate, are often prejudicial to the Stomach. For can these things be comforting that are administered while the forces of the Disease still survives? how shall the Citizen fortifie himself, that has received unto him a domestick Enemy stronger than himself? If the Disease bring a man down that was strong and in good health, how will it suffer him to be fortified when he is brought down? I speak not here of specifick Cordials, I let those alone also that recruit and illustrate the Spirits, and hinder their resolution; these are not to be deprived of their due esteem: but I censure only the abuse of comforting things. Now those which are truly such, are those that subduing the Morbifick causes add strength to the Bowels; that by correcting the Ferments, if any of them were weak, and restoring them to their pristine vigour, make them again mindful of their wonted office: In which matter we have the consent of Sennertus in his *Paralip. ad Institut. p. m. 79.* admonishing, That comforting or strengthening Medicines ought to be such which preserve and restore the Instruments of each Faculty, to wit, the Substance, Temper and Spirits of the Part, and that take away the Causes that violate them; and that therefore respect is always to be had to the Cause of the Disease, and the weakness of the Faculties, and heed is to be taken that whilst we strive to please the palate of the Patient, and to recruit his Spirits, we do not encrease the Cause of the Disease, and so also the very debility of the Faculties, especially by such things as in their whole kind are foreign, and have no congruence with the Spirits, nor are grateful to the weak Ferments of the Viscera. As to the usual Juleps, (without the conjunction of prevailing acid Spirits) Elestuaries, and Emulsions, and other Medicines of that Nature that easily Ferment, it is certain that they are very grateful to the Well, and to such as are in the declination of Fevers, where the Ferments of the Viscera have again in some measure attained their pristine vigour, as Galen testifies *Comment. 5. Epid. 14.* but they are naught for the Sick, and hurtful in most Diseases of the Stomach and Womb: for these being in a preternatural state, are only delighted with bitter, acrimonious and acid things: other Medicines are quite opposite to the Ferment of the Stomach, and so make the Digestions more difficult. Sugar (a common Ingredient in Cordial Juleps, &c.) being Chymically dissected, passes partly into a most ardent Spirit, partly into a Corrosive Salt; what then is this like to do in a Morbous condition of the Stomach, where all things are governless? In a nidorous Crudity it will be changed, like Proteus, into sulphureous dross; in an acid, it will pass into a corrosive Salt; where there is no doubt but that the preternatural scorbutick acid Salts are exalted by those of the Sugar, and that thereby there is given a greater occasion for the obstructions of the Viscera; also that febrile Ferments are encreased hereby. To which account, *H. ab Heer Lib. 1. Observat. 5.* long ago subscribed: It is certain, says he, that those who in Fevers have often taken Syrups, Conserves, and other Sugared Medicines, which most Physicians have used to prescribe, have many of them died; for I am certain that by the Sugar which easily turns to Choler, fuel is added to the Fever: whence Avenzoar writes, as Mercurialis cites him, that those who often use sweet things, can hardly be preserved. Shall that which is self is always prone to ferment, hinder other things from corruption and fermentation?

III. The more frequent use of Alexeteries is hurtful, left by custom Nature come to receive no benefit by them: *N. Bocca Angelinus cap. 32.* ¶ Great caution is needful that men indulge not themselves too much in the use of Cordials: For I have known many eminent both Men and Women from the more

frequent use of these fall into this bad custom, that it has become necessary to take a draught often in a day, either of some generous Wine, or Spirit, or of some Strong water: yea moreover (inasmuch as Nature being a little accustomed to Extraordinaries, remains not long content with the same) to encrease them daily, and to repeat them oftener; so that at length the Stomach could bear or digest nothing moderate, but still desired stronger and hotter: But the other Viscera, and especially the Liver have been so dried and parch'd thereby, that the Blood being lessened as to its quantity and depraved as to its Crasis, a morbidous Cacoehymie or shortning of life has superven'd. There are sundry occasions that bring men into this bad custom of sipping Cordial Liquors: for in sudden Faintings, which are perhaps occasion'd by great Grief, toylsome Labour, vast Sweats or acute Pain; also when one has eaten something that agrees not with his Stomach, but causes a weight and a Nausea; or when a swooning or stupor seems to be impendent through a Spasmodick disposition; yea for many other causes, it is usual to guzzle vinous Spirits: and then after that such Cordials being taken some time begin to be agreeable and delight, the mass of Blood being a little more freely expanded and more accended by every taste of them, the whole Hypostasis of the Soul is thereby amplified and excited into a kind of Ovation: which subsiding again, the Soul remembering that complacence, and being not content with her present state, affects the same again, and craves after more: Wherefore upon every trouble of Body or Mind, as soon as the Spirits quail a little, a Cordial draught is presently desired to raise them again; and so by the often unprofitable spreading of the sails of the Soul, the Fabrick of the Body it self, as of a ship, is shattered. Nor does this evil custom prevail only among drunken Companions; but sometimes learned Men, and fine and ingenious Women, that they may the more improve and exhilarate their Genius, by often sipping of hot Spirits and Waters, or of *Aqua Vite*, (although it be but improperly called so) undermine and often overturn their own health.

IV. When the Stomach languishes, thick Alexipharmacks are more commended than liquid, that they may stay there the longer: When the Heart is affected, liquid are better, because they penetrate more speedily, as *Prævotius* has experimented.

V. They are not convenient before an universal state of the Disease, lest they move the crude humors unseasonably, or carry them to the Heart: or lest by drawing them to the inner Parts they increase the Obstructions, shortness of Breath or Putrefaction: therefore let them be given after Concoction is finished.

VI. Some say that Cordials may be made to exert their vertue by the means of the circulated Blood, without taking them in at the mouth: The manner of Administration is this: Let the Arm be tyed above and below; then having emptied the Mediana, infuse a Cordial liquor through a Pipe made of a Lark's Bone, one end of which is fitted to an Oxe's Bladder, and the other put into the Mediana, (or some fair vein of the Foot) squeezing the Bladder: when the liquor is injected, shut the hole, remove the bandages, and the substance and virtue thereof will be carried to the Heart by means of the Circulation.

VII. The most Serene Prince *Christian Marquis* of Brandenburg died very old: His Corps being opened, the Heart being dissected sent forth a very grateful Odour, altogether like those Emulsions and Juleps (viz. *Confect. Alkermes*, Cinamon water, &c.) which had been given him some days before he died: An infallible Argument, that Medicines which are taken, stick not in the first

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Willis

Rhod. in Sep-
tal. p. 147.

* Baldus, p. 3.

Alfar. & Cruce
Prophyl.
Concl. p. 72.

ways, but by a continued use they may penetrate to the very Heart with their virtue almost intire, and retaining their qualities, at least partly.

VIII. In Hypochondriacal cases Cordials are sometimes to be used; yet let Powders and Earths alone, as encreasing Obstructions.

IX. The Ancients mixed *crude leaf gold* with many Medicines: but to what purpose I pray, unless to please the Eyes? for its substance is too solid and compact, to be resolved and brought into act by our heat. Nor does it suffice that some determine the *Effluvia* of the Heart and Gold to be Sympathick, and therefore they give leaf-gold; for besides that, this supposition may be destroyed with the same facility as it is asserted without Reasons, it might be applied outwardly in greater plenty, and without doubt with greater profit, and less or no loss. ¶ But I think it is without doubt that being Chymically resolved and prepared it has many virtues, seeing Experience testifies it: But whether it have also a notable power of comforting the Heart and refreshing the Spirits in an occult manner, I leave every one to think what he will. It is safest that every one conclude in this case not as he has read or heard, but as he has himself experienced. But that Gold has many other virtues, is certain; but what those are, all say not alike: for there are some who take it almost for an universal Remedy; but although it cure many and those very dangerous Diseases, yet it removes not all; and those which it does remove, it will not do it alone, but there is need of other Medicines. But it is especially profitable in a Cacochymie that is pertinacious and fixed more closely in the Parts, in the same manner almost as Antimony rightly prepared: whence, as *Fr. Antonius* relates in his Treatise of *Aurum Potabile*, there follows upon the taking of it sometimes a Vomiting, sometimes a plentiful Pissing, and sometimes Purging by Stool, accordingly as the Humour and Nature incline to this or the other place. And he shall find this to be true who ever diligently considers the Histories of those that have been said to have been cured by *Aurum Potabile*.

Schrod.
Pharm. l. 3.
c. 8.

Sennert. l. de
Galen. &
Chymic. conf.
& diff. c. 19.

X. Concerning the Preparation of *Antimonium Diaphoreticum*, although in Chymists Books it be very well order'd to be with a triple proportion of Nitre; nevertheless Artists do in some manner conceal those things which are fittest in each ones Art: Hence we have a mind to mention a few Cautions, and those light as to appearance. 1. The fire is diligently to be heeded, which ought to be a mean betwixt fusing and gentle; for if it be kindled in too gentle a degree, and the matter be put in before the Crucible be hot enough (wherein the stress of the whole operation lies) the Antimony is not rightly detonated, and its vomiting virtue is not quite destroyed, or at least it arrives not at the desired whiteness: And if the fire be too fiery, the Saline Particles do too closely receive the Antimonial to within themselves, and hence all the matter, through too great an ebullition, strives with great danger to fly over the edges of the Crucible, and afterwards the Medicine becomes none of the best. 2. The Nitre ought to be very well dried first, and not be moist, because otherwise the watery Atoms retard the Detonation, and oppose themselves to the fire, so that the impure sulphureous part cannot rightly deflagrate. 3. Heed must be taken also that it be not too much fixed, nor stay too long in the fire; for then it remains very light, and its Sudorifick virtue is almost abolished, the Dioretick remaining: whence it is best, as soon as the detonation is over, to cast it presently by little and little into cold water (but if you put in too much at once, the bottom of the pot will be in danger of falling out) and then let it be

rightly (elutriated or) drained: On this manner you have a Diaphoretick Antimony of a good white, joined with no yellow; and although it be precipitated afterwards in Vinegar, there will depart from it little or no Magisterie. Those things that are commonly said of it, viz. that it returns to its pristine Nature as soon as the fixing Particles of the Nitre are evaporated, whence 'tis advised that it should only be given when 'tis new; or to be burnt again with the Spirit of Wine, all these things are to be understood only of this Medicine when it is not rightly prepared: for Experience testifies that this fear is wholly groundless, if the procedure be according to Art.

XI. That I may confess it ingenuously, no great trust is to be had to the Bezoar-stone: Seeing although those Faculties be granted to the true Bezoar-stone that are ascribed to it, yet because its dearth makes many that sell it endeavour to counterfeit it, we can hardly have any but what are adulterate. The Writers of Indian Affairs themselves, witness that it is rare and very dear among the Indians, whereas with us it is plentiful and cheap enough.

XII. Some give a great quantity of this Stone, seeing it has no hurtful quality, viz. to twenty or thirty Grains. *Zacutus* ascends to a Drachm: This he confirms with the History of one *Eleanor*, who falling into a very Malignant Fever, and taking a very great quantity of Bezoar, a Drachm at a draught, escaped very well; whereas all his Patients that by Contagion were seized upon by the same Disease, who had a small Dose given them, died. The most hurtful quality of Poisons seems to evince the necessity of a large Dose, in that it proceeds not slowly, nor promises a secure Truce. If thou encounter the Plague slowly, thou shalt be conquer'd and not conquer: The middle way is the safest, because the extreme on both sides is a fault: The small Dose of three Grains hath not that strength as to resist Poisons and the Plague, a large Dose burthens the Stomach, seeing it ought to be repeated: This seems convenient: Take of Oriental Bezoar-stone and of Emerald prepared of each six Grains. The exhibition of Alexipharmacks loves not Unity; one Dose takes not away the fountain of the evil; that which does not its office at once giving, must be given twice or thrice: an equal contrariety is to be attended, as in the Dose, so also in the Repetition.

XIII. *Hartshorn* is not much worse than the Bezoar-stone or Unicorn's Horn, against Poisons and Poisonous Diseases: for it defends the Heart from malignant Vapours; it cuts the toughness of Humours, it opens the Obstructions of the inward Viscera, and by its penetrating quality resists the Putrefaction of the Humours, and by a certain Balsamick virtue corrects their malignity; whence by *Joubertus* it is called a great Cordial. But it is to be given calcin'd and prepar'd, not crude; seeing when it is given crude, it often passes out by Stool as it was taken, without any alteration: for its spirituous substance, that is the cause of all its action, whilst it is bound by the feculent matter which the Hartshorn consists of besides, is hindered from exerting its virtue, so that in the crude it lies as it were buried: yea neither can the Salt exert the virtues of its Balsam, unless it be freed from its earthy Bands. Seeing therefore the Diaphoretick virtue (says *Horsius Probl. Med. Dec. 1. q. 4.*) which is in this Medicine through its fixed Salt, together with other qualities, is very much set at liberty from its Impediments after Calcination and Preparation; we therefore conclude that Hartshorn burnt and prepared is more convenient than crude; yea this Medicine is so safe and pleasant even in the greatest Diseases, that, Necessity urging, it may be given very profitably to every age, even to Infants new Born. Let the same

G. Wolf.
Wedel. Misc.
Cur. an.
1672.
Obf. 62.

River. Praef.
lib. 17. cap. 1.
Vide Valler.
Mech. Med.
lib. 4. cap. 2.
Primros. de
vulgi error.
lib. 4. c. 36.
Rubeum in
Celsum, lib. 3.
c. 7. & alios.

Rolinc. m. m.
lib. xi. S. 2.
c. xi.

Fabr. Hil-
dan, l. De
Gangrana,
c. 12.

same judgment be past upon the Bone of a Stag's Heart, which I think unprofitable, unless it be calcin'd and prepar'd.

XIV. The virtue of *Hartshorn* consists chiefly in a volatile Salt and Sulphur, with which the Bones of Animals abounding, that which is pure they take for their Nourishment; what is superfluous, they thrust to the extremities of the Bones: this luxuriant matter being long exposed to the Air, after a year is fasten'd and vitriolated as it were, passing into hard ragged and great Horns, through the volatile and extensile Nature of its Balsam, and hence it is believed to be a great Cordial, and a true secondary Bezoardick: for by its Spirit (which is altogether of the same Nature with that of the Blood) it recreates the Heart; by its sweet Balsam it cherishes the radical moisture; by its Armoniack Salt it penetrates, and attenuates tartareous Matters, provokes Sweat and Urine, and therefore opposes a pestiferous Air: And by its drying virtue, which remains in its Earth, it drives away Putrefaction, kills Worms, helps Fluxes of the Belly; whence for divers Indications, divers Preparations also of Hartshorn are to be used: Thus in an Ethereal Plague and Poisons I use the Spirit and armoniack Salt of Hartshorn as a notable Diaphoretick: In malignant Fevers, as the small Pox, where the whole mass of Blood is not only accended, but also putrefied, I use secondary Preparations that are derived from its whole substance, namely Decoctions of it, Gellies and Extracts: for Swooning I use the Water distilled from the (typhi, or) snags of fresh Horns: for a Pthitick and retarding old Age I use the sweet Balsam thereof: for Worms and *Diarrhæa's* I use the Horn vitriolated.

XV. Here the negligence or unskilfulness of some Apothecaries is to be noted, that burn *Hartshorn* not in melting Pots, but simply among the Coals: this indeed is a compendious Preparation, but such as is hurtful to the Patient; seeing Coals have a malignant vapour in them, which is manifest in those that draw it in with their Breath in a close place.

XVI. Although those Animals be not known, from whom the Horns call'd *Unicorn's-horns* are taken, yet their virtue is not therefore to be denied, which is only known by Experience: for let any one (that would make tryal of a piece of this Horn) give some Poison to a Whelp or Pullet, and if he find that by giving a little of this Horn in Powder the Animal escape, he will find reason to esteem it as a good Medicine. If we approve of Hartshorn, why should the same Faculty be denied to other Horns? Therefore I would not morosely inquire whether they be the Horns of the Unicorn or of some other Animal, so long as they are good and effectual: for it is certain that both Elephants Teeth, and Whale Bone, and the Teeth of the Sea-Horse, and common Horns adust, and Horns digg'd out of the ground, and other factitious ones are often sold for the true Unicorn's-Horn.

XVII. If Treacle be taken daily to a Grain, it makes the Body Poyson-proof, (without inflaming) as *Galen* reports it happen'd to King *Mithridates*. I have seen many who have been subject to Swoonings without evident cause, cured on this manner: and it is an excellent Remedy, where we have suspicion of any poisonous matter lurking in our Bodies.

XVIII. Let children abstain wholly from Treacle, for their Age is too weak to indure so potent a Medicine, and it colliques their Body, and wastes their Primiægenial heat, like as the light of a Lamp is extinguished by pouring too much oil into it. I have seen a Boy that died through the unseasonable use of Treacle: He had been feverish a long time, and his Body being wasted, his Strength

was gone; his Guardian compelled me against my judgement to prescribe him some Treacle, which he could not concoct when he had taken it; for it was above the strength of the Boy, and dissolv'd the habit of his Body, &c. so that he died that very Night. Whether it be altogether to be denied to Children, See *Galen Tit. de Morbis Infant. Lib. 9.*

XIX. As we must guess at the degree of the Poisonous infection of the Blood and Heart, so also at the Dose of the Alexipharmack Remedy: a little quantity cannot resist the great Malignity in acute Fevers or the Plague, as suppose one or two small Doses of Treacle, or of a Sudorifick Bezoardick Tincture: Such plenty is to be prescribed as may drive out the Poison by large Sweats. Thus was a Sanguine Country-fellow (being of a good habit of Body) freed from the Plague by taking a Drachm of Treacle, and laying so many Cloaths upon him as made him sweat. Yet let not the quantity be too great: One being struck with fear in the time of Contagion, took a little Treacle, whence Sweat followed on the Night: the day after he took some more; he repeated it the third time, believing that some Contagion lay hid; so that in all he took at least four or five Drachms: on the Night following he was taken with a most burning Fever, and Pulules also arose. Treacle, seeing it is hot in the second, and dry in the third degree, by reason of its driness must not be given to above a Drachm, though in respect of its heat we may ascend higher.

XX. Whether is there a Cordial virtue in Precious Stones and their Magisteries? Many laugh at their virtues, others suspect them; hence are many Compositions, amongst which *Confectio de Hyacintho* is famous, being noted for many virtues. *Avenzoar*, *Mindererus*, and *Zacutus* attribute great virtues to the Emerald. But the simple Preparation of Stones ought to be more esteemed than their Magisteries; seeing 'tis doubtful whence these latter have their virtue, whether from the proper form, or from the *Menstrua* or Dissolvents; if from these latter, they will do more harm than good: and seeing the weight of the Magisteries is often greater than that of the matter to be extracted, was before; it breeds a suspicion that therefore part of the *Menstruum*, whether it be vitriolate, tartareous, or have the Nature of any other Salt, insinuates it self into the Magistery, and is to be washed out of it by no Art. The weight indeed is increased in the simple Preparation of them, but that happens from another cause, namely, because the Air contained in their Pores whilst they were whole, vanishes upon their grinding; or because by the long agitation of them upon a Marble, something parts from it, and mixes with the prepared Medicine: but this is less hurtful than the corroding *Menstruum* added to the Magisteries. *Laur. Hofman* writes, That the Bishop of *Breslaw* often drank the Magistery of Perls, and that when he died, the coats of his Stomach appear'd black and corrupted. *Libavius* shews by some examples that many have fallen into a Consumption by the use of the Magistery of Perls and Corals: and that many have died thereby, the coats of their Stomach and Guts being plainly eroded by their acrimony.

XXI. One Drachm of Magisteries rightly prepared can do more than an Ounce or more of the vulgar unprofitable and unwholsom precipitated Magisteries: seeing these being taken into the Body do only like slak't Lime (as it were) whiten over the Stomach and Guts, and oppress them by sticking long upon them undissolv'd; or if they glide out of the Stomach, by obstructing the Mesaraick Vessels, and hindring Concoction, they are apt to cause at length grievous Diseases: I will confirm this by an Instance: A Nobleman complained of a weight of his Breast and Stomach, of a nausea, want of Appetite with a lingering but continual Fever, though he used a very

S f f 2

good

Sam. Clossius
ad Gr. Hor-
stium Decad.
1 Probl. qu. 4.
where there
are several
Preparations
of it.

Fabr. Hil-
dan, l. de Gan-
grana c. 12.

Primitiv. de
vulgi error.
l. 4. c. 38.

Panazol.
fascic. 1. A-
can. p. 212.

Rolinc. m. m.
lib. xi. S. 3.
c. xi.

Salmon.
Cent. 1.
Obi. 51.

good diet, and Cordial and Cephalick Powders. Although he were naturally weak, yet I thought good to begin the Cure with some general Remedy; and suspecting from his *nausea* that some crude matter stuck in his Stomach and its upper Orifice, I got him to consent to take a gentle Vomit, which wrought very gently twice upwards and thrice downwards. In the afternoon I found him pretty well, and he told me that he found great ease about his *precordia*. His Lady bringing out a Silver basin shewed me what he had Vomited, which was about a quart of thick and viscid Phlegm, in the bottom whereof there was a Powder, like white ashes, a Fingers thick, for a sediment. Looking upon his Stools also, they likewise lookt just as if they had been mingled with a great deal of ashes. Now several dayes before, he had taken daily a precious Powder, almost of the same colour, made of the Magisteries of Perls and Corals, of Harts-horn burnt and prepared and an Epileptick Powder, &c. ¶ It is to be noted that the greatly cryed up Magisteries prepared of Coral, Perl, &c. especially by the Oyl of Tartar, answer not the promises of their Authors, seeing by such preparation, their vertue to temper, fix and concentrate acids, is broken, if not quite abolished: It is therefore better to use them only reduced into a fine Powder, than so prepared or rather corrupted.

Zwelff. append. ad animadv. in Pharm. Aug. p. m. 92.

Franc. de le Boë Sylvius Tract. l. 1. c. 7.

XXII. In the dissolution of Perles it is a common error to pour distilled Vinegar upon them. For it is sure the Liquor that ascends in distilling of it is insipid and altogether unfit for dissolving of Perles; and that which remains in the bottom after distillation, by its corrosive vertue dissolves both Perles and other things, and reduces them into a powder as it were and calcines them: now this is not to draw out the Spirit of perles, but to corrupt their whole substance. The Bishop above mentioned took often of such magistry of perl as this, and when he was dead the coats of his Stomach appeared black and corrupted: Marquess John's Lady had the same hap, in whom the Coats of the Stomach were plainly eroded. There is indeed hardly any Glass that it is kept in, so firm, but it will erode it and turn it to ashes.

Monav. in Epist. Schol. 12. Ep. 163.

XXIII. Among Alexipharmacks *Tormentil* and *Bole*, are worth for those who have a dry Belly: *Danc. Liddel. l. 3. c. 5.* for by their earthy adriiction they cause obstruction and putrefaction.

XXIV. Left those who are accustomed to the use of the Volatil Salt of Vipers, find unexpected effects of it and such as are contrary to its Nature; I would admonish them that they carefully avoid the mixing any thing with it that is very acid, especially Spirits, such as are these of Salt, Vitriol, Sulphur and the like, for by these it would be fixed, and its operation wholly hindered.

M. Charraz tr. lat. de vipera c. 9.

XXV. Sulphureous Spirits kindle the Sulphur of the Blood, Volatil Urinous ones rarefie it, and Acid Spirits tame and dull or blunt it: All these used inwardly restore the heat and motion of the Blood, encrease and vigoate its balsamick oleous parts: whence Apoplectick, Hysterick, Cordial Spirits and the like revive the Spirits, remove fainting, and recall the languishing faculties. But seeing both these and the rest are very active, they are all of them to be given warily: For being given unseasonably, 1. they fill the head and intoxicate; 2. they deject the appetite, which yet, being used moderately, they are in their own Nature rather apt to restore, by exciting the heat of the Stomach: 3. they make men Phthical and Hydropical; the former, by consuming the dewy Nectar of the parts, the Serum, and by making the Humours more acrimonious; the latter, by destroying the tone and temperature of the Viscera: Whence Hofman in his Preface *De medic. Officin.* writes rightly, that

our Countrey Brandy whether it be made of the Lees of Wine, or of Wheat or Spelt, or of Juniper-berries, is so hurtful to the Liver, that in two or three months by bringing a colligation it causes a Dropsie that is deadly to all that fall into it. I have often observed the same thing myself, that all those stout drinkers of Brandy have at length become phthical or Dropsical or both. But Urinous Spirits rarefie the Blood, and by making the Serum halituous and fluxile, provoke sweat; whence whensoever there is need of volatilising, let these be at hand; for they promote motion and heat far more powerfully than the Spirit of Wine; they expell also, whence they are very powerful in driving out the small Pox; they drive away drowziness in the Apoplexy, Epilepsie, and fits of the Mother; hence they are good in malignant diseases, if any be: but we must take heed that by too much rarifying we do not dissolve the Blood and hasten death. Hence those admirable effects are to be referred hither that are here and there ascribed to them, as Hartman relates of the Spirit of Soot that it has raised to life again those that were even a dying. Neither yet is there any reason why we should so much esteem the Spirit of Vipers and Soot that is more stinking and ungrateful, so as that we should attribute more to them than to others; for as good as any, are, of the more Sulphureous and Bezoardick, the Spirit of Ivory and Harts horn, and of the purer, the Spirit of Sal armoniack. Lastly seeing Acids tame and blunt the Sulphur of the Blood, acid Spirits do this in general, yet these also vary in regard of special effects and qualities; thus Spirit of Vitriol is hurtful to the Breast, the Spirit of Nitre is an Anticolic, the Spirit of Salt performs all the offices of an acid in the first degree as it were and indifferently: The rest are to be referred to these.

Wedel. Pharm. p. 201.

XXVI. Such Gellies are to be chosen as are 1. new, for old grow rancid, and have an ingrateful and musty taste: 2. such as are tender and whitish, not the black, dusky, hard like horn, or such as are not at all grateful or agreeable to the Stomach: hence when not many years ago a very great quantity of Harts-horn Gelly was given to a Child of a noble Family lying ill of the small Pox, by the advice of an eminent Physician, and thereupon a little before his death he begun to vomit blackish stuff, much like the Gelly in colour, and a short while after died, the Physician lost a great deal of credit by it: Also 3. let them be liquable, such as will melt of their own accord as it were upon the tongue, and slip down pleasantly. Mucilages and Gellies have a very noble use in driness and chapping of the Tongue in fevers, for they allay the acrimony of the Humours, the Serum and choler, which they make more slimy and thick; they temper the fervour of the Blood and keep its consistence in safety, that its fibres part not too much from one another: They also quench thirst, by allaying not only the heat of the Stomach but of the Lungs also, whence thirst chiefly springs: yet the Stomach is not to be bird-limed as it were with all of them. They are good also for taming and blunting the wasting ferment of the Blood in Hysterick and Phthical persons. Yet in all of them respect is to be had to the Stomach, lest its ferment be too much blunted by them, or the tone of its substance be loosened.

Wedel. Pharm. pag. 142.

Aliteratues.

Alteratives.

See Preparatives below.

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I. **T**Hose Medicines are called temperate *a priori* or in themselves, wherein the active and passive qualities temper one another, or which exceed in neither, nor are so furnished with the active Principles, *viz.* Salt, Sulphur and Mercury, that any of these do sensibly predominate; but the particles are so commensurated among themselves, that there cannot be observed the excess of one above another. And those are called temperate *a posteriori* or as to their effects, which neither heighten nor diminish our native heat, but do kindly cherish and preserve it, so long as they keep within the bounds of their mediocrity; and they are generally in a manner alimentous, and such as one can hardly exceed in the use of them. But these have a great latitude, so that those are properly called temperate, which otherwise are reckoned to be hot, cold, moist or dry in the first degree. A sign of this is, that they leave behind them no excess at all in taste, smell or effect. And so as to temperate Medicines, note 1. that many of them are aliments; 2. they are convenient for lenifying the heat; 3. they digest and are paregorick; 4. they are good for mitigating roughness in the throat, or any other; 5. especially in the *Phthisis* and hot Diseases; 6. for they strengthen, and demulce the pores, and so are temperate also inwardly.

II. Authors are wont to deliberate 1. of Degrees in the qualities of Medicines; for seeing even by comparing Mixts to one another some are more furnished with some of the active principles, *viz.* Salt, Sulphur and Mercury (for from these we will chiefly deduce the Faculties of Mixts, as the *Aristotelians* and *Galenists* derive them more from Elements) and others alter the Body more, whether in active or in passive qualities; some heat more, others moisten more, &c. we may easily gather that there are some degrees to be granted, as differences and terms of acting, or a certain propriety, which is Geometrical, not Arithmetical: And so there are two axioms and certain *Postulata*, 1. that Mixts do alter the Body; 2. that they alter more or less evidently, or weakly, or most manifestly; whence there are four degrees concluded upon: But besides the degrees, there are 2. *mansions* of the degrees: Which although some deride, yet this distinction is necessary in the active qualities: For if it be true that there is a great latitude of these, and that all cannot be included in strict limits, why may not one inquire into these more narrowly, yet so that we may indeed the more express the latitude it self, and yet not thereby confound our understandings?

III. Those Medicines therefore are said to be *hot a priori*, or in themselves, whose consistence is so framed, that the active Principles, Salt, Sulphur and Mercury, but especially the Sulphur and volatile Salt have a certain prerogative, and that more or less, which is manifested chiefly by the smell and taste: but the other passive principles are subjected to these. And indeed those are to be esteemed hot in the first degree in which the aforesaid principles predominate gently, sparingly and moderately; or are only superficially present, and not intimately and thoroughly dispersed, or are not at their own liberty but blunted by earthy and watry particles. For the active principles, Salt, Sulphur and Mercury, lend this temper to Mixts; and the passive, water and earth modify it. Those Medicines are called *hot a posteriori*, or from their effect, which indeed alter our heat, but without any notable energie, by little and little, obscurely and hardly sensibly.

Thus, *hot in the first degree* are most of those that are called temperate, whether they be herbs, roots, flowers, woods or other mixts that are less odoriferous, and that have no excessive and notable taste; whether they be also *Emollients*, such as have a moderate humidity withal, as mucilaginous and fat; or *Digesting*, as the rest. These have place in divers diseases, they open gently, strengthen, discuss, soften and temper. As to their taste, the hot in this first degree are *fat* and *insipid*, yet with a gentle tang of volatility, whither also are referred by some, Mercurial plants, Porcelain, Mercury, Pellitory, *sweet*, as Lyquorish: *earthy*, which have a kind of a volatile farewell, as Fumitory, Liverwort: *Odoriferous*, which have not a taste answerable, as the flowers of the Linden-tree, primroses.

Hot in the second degree a priori, or in the mixture it self, are such as have Sulphur and Salt, volatile or fixt, more eminent: whence such are 1. *bitter*, as Wormwood, Aloes, Birthwort, *Cardus Benedictus*, Germander, *Gratiola*, or Hedge-hyssop, &c. 2. *resinous*, Balsamick, Spirituous, as tops of Pine, Marigold, Amber, Myrrhe, Turpentine, Spirit of Wine, Balsam, gum Ammoniack, &c. 3. *somewhat acrimonious*, as Rocket-seed, Jalap, and other not very strong purgers: 4. *saline*, or middle Salts, as Tartar vitriolate: 5. *middle Aromaticks*, as Balm, Cinnamon, &c. *Hot in the second degree a posteriori*, or in their operation, are those which exceeding more manifestly, sensibly and notably in smell and taste or both, do alter, but yet without trouble or hurt, so that as yet they may be endured, though with manifest alteration: And so these have a middle place as it were, they strengthen, open, provoke the Terms, absterge, alter, and perform their other Offices more strongly than the former: They are also Balsamick, such as preserve the vigour of the Blood intire, and avail to long life.

Hot in the third degree a priori are those wherein volatile, or fixt Salt do more eminently predominate, with or without an accession of Sulphur: whence belong hither, for instance, 1. *all volatil Salts*, as of Scurvigrass, Cresses, *asarum*, &c. 2. *lividial Salts*, or the fixed Salts of plants: 3. *acids*, which have also an acrimonious virtue: 4. *acrimonious* and biting things, as Pepper, Burnet: 5. *stronger Aromaticks*, as Cloves, Mace, &c. *A posteriori* those which alter manifestly, sensibly, and with hurt as it were, if there be any excess, so that neither the tongue can endure them long without trouble, nor the body in any great quantity: Whence these rarifie the Body more, increase its Sulphur and volatile Salt, tame the fixing Humours, take away a cachexie, discuss wind, open the pores of the Nerves, and so are good in the Palsie, are antiscorbutick, powerfully break the Stone, refresh the weak Spirits, and rouse the Apoplectical and Hyterical.

Hot in the fourth Degree à priori are those which have a more acrimonious and almost caustick Salt, (whether *volatil*, as Onions, Pepper-wort; or *fixed*, as Mercury sublimate) which predominates over the Sulphur it self although present; whence such are 1. most acrimonious, 2. rubifying, 3. eroding: hence they afford vesicatories and potential Causticks, that erode and corrupt more strongly. *A posteriori* those which are of the greatest activity, most vehement and as it were instantaneous operation, and not without great hurt. Yet these also have their certain mansions, for Arsenick operates more powerfully and sooner than Onions, &c.

IV. *Medicines cold à priori* are such wherein there are no volatile, hot, acrimonious, aromack or aereal particles, but the active principles, particularly the Sulphur and Mercury, are more sparing, or subjugated; and the Salt in like manner is either absent, or has attained a fluor, and is remarkable for inverted acid particles: or else they are such in which the passive principles, water and earth, are found more prevailing, and the acid Salt as aforesaid. Cold Medicines are opposed to hot, even in their actions; so, for example, acids fix the bitter and acrimonious, obtund the oily, and so forward. *A posteriori* those which being referred to our heat, do not encrease it, but demulce it when it is ungovernable, and bridle choler. For as the hot rarefie the Blood, exalt the Sulphur with their sharp darts, and acuate the volatil Salt; so the cold do concentrate the same, deprefs its Sulphur, and fix and coagulate its volatile Salt.

Those chiefly are in this place reckoned for cold that are *univocally* such, which, for example, either dilute and demulce, as 1. watry; whence Juleps, the whey of Goats milk, the decoction of Barly, the juice of Birch, of Quinces, and other acidulous juices, (which most of them are such in the first degree, and others moistning withal) do notably cool: so also all *muclaginous* and *purely gumous* are cold, as the white of an Egg, Tragacanth, Harts-horn, Aloes, Mans-Skull, Gellies, the root of marsh-Mallow, Gum Arabick, the four greater and four lesser cold Seeds, which have a certain oiliness, but such as is watry and temperate: Or they *tame and infringe the Sulphur and volatile Salt*, as 2. *Acid*, juice of Citron, Sorrel, Berberries, and 3. *nitrous*, Pellitory, Mercury, Spinach, Orach, Violet: Or they *respect ebullition and motion*, as *precipitants*, as 4. *earthy*, for example, plants, the flowers of Balaufrins, parts of this nature of Animals and Minerals, also Woods, as Sanders, Oak, and especially those which are properly called *earthy*, as bole-Armene, *terra Lemnia*, &c. Stones, as crystal, jacinth, and those which are of an alkaline Nature: Or they *constipate and constringe*, as 5. *austere*, Hyptick, sower, which are examples of the third degree, Tormentil, snake-weed, the rind of Pomegranats, *acacia* or the juice of Sloes, *hypocistis*: Or they *plainly destroy*, as 6. *poisonous*, which are endued with an excrementitious earthy and watry, and with a stinking and impure Sulphur, and so induce a contrary consistence on the Blood, as Hemlock, Henbane, *Stramonium* or apple of Peru, whence they are poisonous: As Medicines hot in the fourth degree kill by eroding, so those cold in the same degree by suffocating and coagulating.

Medicines cold *Equivocally* and energetically, are those which either dissipate and procure the exhalation of Sulphureous soots, as prevailing by a volatil Sulphur and being themselves hot, as Spirit of Wine, camphor: or *take away the Cause*, (as well the fermentation and ebullition, as obstructions,) as openers. Such namely as are Sulphureous, are all of them heating, unless they serve for dissipation and hot exhalation, on which account they cool by accident: the Lixivial Saline do more rarefie the Blood, and so do also heat it: but the

Acid do concentrate and refrigerate the same: the mean, as Tartar vitriolate, are of a middle nature, but they rather commonly heat, cut Phlegm, &c. especially common Salt. So that the cold may be referred to the *summa Genera* as it were, as consisting of watry, earthy and non-lixivial Saline particles.

V. Here the question may be determined, whether Acids be cold or hot. For there are not wanting some that affirm them to be hot, arguing from their acrimony, biting, and that corrosive vertue that they are endued with: Those that maintain them to be cold, produce their effects also that are manifestly cold, as for example, that acid Spirits allay thirst, and cool the Body by blunting the bilious Humours. Here seems necessary a distinction, first between the hot Sulphureous, and the hot Saline; secondly between the external use and the internal, or between that which belongs to the solid parts, and that which belongs to the moist and spirituous. The hot Sulphureous, that is, those which have Sulphur predominant, chiefly with a volatil Salt, do all of them increase our natural heat; but those that want Sulphur, and possess a fluid Salt, as Acids, have indeed acrimonious, cold, biting particles; but he would be absurd that should use them for restoring or invigorating the innate heat, or the Sulphur and volatile Salt: Whence although in their external use they cause an erosion in the solid Parts, and through their acrimony cause the Parts to be pained and grow red, which very thing we may also observe in a more tender Stomach, and from a larger Dose, as the Patients do sometimes perceive an *æstus* and heat from the unwary use of the Spirit of Vitriol; yet with relation and respect to the Blood, to our heat, or to the Heart, they are, and are deservedly called, cold. Others determine, that they cool by accident, inasmuch as being joyned with cold vehicles, by their penetrating vertue they make those more apt to cool: others otherwise; as for instance, that they cool by the perspiration of the fiery heat, &c. There is the like reason also of the nitrous, for through the disposition of their foursquare or sexangular particles (for instance) they express a manifest sense of cold even upon the Tongue. Therefore it is better to call them cold effectively, and rather to reckon them among the cold than the hot: yea it were better to know their nature more intimately.

VI. There is a doubt about some bitter Medicines, that are reckoned among the cold, as Lettuce, Cichory, Endive, Sow-thistle, Poppy, Sallow; by whose example there are some that deny that assertion of Galen, *That all bitter things are hot*, as particularly *Averroes* and Others: But the answer is the same as we gave of odoriferous, to wit, bitter things, as such, are all hot; yet nevertheless some of them are called cold, partly because their bitterness is but very little, and is subjugated by the abounding moist Parts; partly because their effect is equivocal; as for example, Liverwort is reckoned among the cooling Hepaticks, yet it rather performs that by that effect whereby it opens Obstructions, absterges Choler, &c.

VII. As to the passive qualities, *moist* and *dry*, it is to be noted, that the denomination is deservedly taken from the active, as being the more worthy; whence those that are eminently hot, are for the most part dry, unless they be substantially moist: (whence *Hofman* affirms of Wine, that as to its quality it dries, but as to its substance it moistens.) But those which are eminently cold, the same (saving an exception) are most of them also moist. We will here repeat our Hypothesis that is proved in another place, that there are two alimentary Humours, the principal the Blood, and the ministring the Serum: As therefore the active qualities, heat and cold, respect and attend the in-

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nate heat, or blood, and the oily and volatil parts of the same: so moist and dry Alteratives dispose the Serum; the moist are those which preserve, restore and increase the Serum; the dry those which diminish, waste and devour it. Nor hinders it that some are actually moist, and yet do dry, through their prevailing Sulphur (for instance;) and that some are actually dry and yet moisten, through a predominant aqueous quality, as Gellies, &c. What we said also of the degrees of heat may be applied here; and yet it is to be noted that there are no Humids in an excessive degree, unless one will call those so which are such substantially; for the same things are predicated also both of those that are potentially such, which are indued with watry, mucilaginous parts; and of those that are actually such, which themselves also differ in degrees: Thus simple and distilled waters, Whey, decoction of Barly with Harts-horn, Beer and Wine moisten, but in different degrees: Or respect is had to the coldness joyned withal; whence Henbane, Poppy, Nightshade, are said to be moist in the third degree; the juice of Lettuce is esteemed poisonous. Moist in the first degree are those which are endued with Particles that are weakly watry and mucilaginous: In the second, those which have the same more evidently. But in general the Mucilaginous do moisten more, and as it were substantially, because they are harderly dissipated; and the watry less, because they are sooner dissipated. Hence in driness of the Throat, and in parchedness and chaps of the Tongue, Practitioners use to prescribe the Mucilages of the Seeds of Quinces, of Flea-bain with the Syrup of Violets, &c. Also those that excel in Fat and Oily parts: hence there are adstringent ointments and liniments properly and in their own nature: so also succulent, green, pulpous and carnisous things are moist: In like manner the oyl of sweet Almonds and Water-gruel are very profitable in that case. Likewise in a squalid and withered habit of Body, as for example in the Hectick and in an atrophic of the parts, besmearings with oyls and fat things, also with mucilaginous themselves (as the root of Comphrey) are more convenient. So the eyes also delight in mucilaginous things, as the white of an Egg, &c. Likewise to smooth and demulce in hoarseness, diseases of the Lungs, Kidneys, &c. This also is to be noted, that driers in the fourth degree, are hot also in the fourth degree: & so cold does modifie moisture, heat driness, at least for the most part: and as preternatural heat requires cold Medicines, so preternatural moisture or ichors require drying.

Driers are those that have the earthy particles predominant, whether alone, or joyned with Sulphureous, or with acid or some other, whence they absorb or dry up greatly; and hence (for instance) chalk, ceruss, lac lune, pompholix, are notable for drying up ichorous humidities: So ulcers that will not fill up with flesh, but are exasperated with Emplasticks, are helped by such dry powders as these; which I have often seen with happy success, sometimes mixing hot things with them (as the powder of the leaves of Birthwort) and sometimes earthy. Hither belong drying and strengthening decoctions and fomentations, such as are often used of Alum, Nitre, Sulphur, &c.

VIII. Alteratives are commonly described by those Medicines that are endued with the vulgar faculty of heating, cooling, moistening, drying, attenuating and incrassating; but these respect not so much the disease as the symptoms: Whence Sennerius himself says, To use refrigerating Medicines, at least because of heat, and not first to take away the matter that is the fuel of the febrile heat, is to cure the Symptom and make the disease worse. Therefore let your Elementary Physicians, who respecting only the urgency of the Symptoms, inquire of the Patient or those that attend upon him concerning nothing

but heat or cold; know that such qualities are mere effects of the Diseases and the Morbifick cause, or products from the furious Archæus; for while it endeavours to expel the strange guest, it raises sometimes cold, sometimes heat.

Alteration therefore is a motion, as to a passible quality, whereby there is caused not another thing, but another manner of thing: And it is either correlative or perfective. A correlative alteration is that whereby a former quality is abolished, and a worse is induced, as is done in the generation of Diseases: A perfective is that whereby a new quality is induced for the perfection of another, which is meant in this place, and we describe it by motion, whereby preternatural and strange qualities, that deprave or corrupt the ferments of the viscera, the mass of Blood and other parts of the Body, are abolished by adjuvant altering Medicines, and whereby the domestick and natural are corrected, and reduced as much as may be, to that natural equability and proportion from which they were departed, that health may ensue from thence.

Alteration therefore is a motion, because it leads to a more perfect being, whereby are acquired qualities agreeable to Nature being repaired by altering Medicines, that perfect health may accrew thereby. Now by these Qualities we understand not only the first elementary, active and passive, viz. hot, cold, moist and dry; nor only the second and such as flow from the modus of the substance, from the various texture of the Parts in the Blood; which, as was said, are nothing else but the products of the Disease or matter, whose departures from a natural estate are easily reparable: but we admit also occult qualities, which are made of ferments that our Soul uses for the performing of its actions, which are such accidents as are immediately in the subject whose they are, and on which they immediately depend, and with which they are transmuted: Thus, for instance, it is impossible, that Acid, or Bitter, or Salt, or other qualities contained in the mass of Blood, should be changed, and not their subjects changed withal, on which they depend as on ferments, and in which they are as accidents. Hence Hippocrates, lib. de pris. med. uses not so much the word ἀλλοιωσις alteration, as μίξις and μέλις, mixture and collon, by means whereof what is disordered is to be restored. Whence also it will much concern a Physician to know in the first place from what principles or ferments such qualities are immediately raised; and then how one is to be changed into another; as for example, how from an acid a sweet may be made, or of a sweet an acid; from a bitter and acid a sour, from an insipid a Salt, from a malignant a benign, &c. For he that knows this, shall easily correct the preternatural ferments of these qualities, that arise, by departing from others in an undue quantity, quality and motion, or when by their fermentative virtues they either invade those of a contrary Nature that are joyn'd with them, or snatch along with them those that they meet with like themselves; or they themselves, where they are either overcome by more powerful, or draw weaker to themselves, do put on divers Natures. In a state of health many things are incorporated with us, and subdued; which if they be not, they degenerate into filth, they violate the vital principle by changing the ferments of the parts, whence, the Archæus is disturbed diversly, and the vital œconomy prejudic'd.

As therefore the said Qualities are not to be defined by the first qualities only, as bare accidents of diseases and morbid causes, but are furnished rather with Hippocrates's Symplics or powers: so neither do altering Medicines themselves simply partake of an elementary nature, but there lie hid in them other noble and occult qualities, by which in their whole substance and appropriation they are contrary

ry to this or that disease; whence we should not have regard only to hot or cold, &c. but also to Acid, Salt, Bitter, and other occult and foreign powers resulting from the ferments whereby man is affected; and, if it may be, we should search out Specifick simple Remedies for all diseases. Wherefore seeing Hippocrates teaches, that distempers happen to a man *à diversum* from the powers, and by them understands the efficacies and vertues of the juices; let us see how we can invent Remedies that are fitly opposite to them, and are furnished also with their powers or Specifick ferments. If therefore there be a malignant fever, and the Blood do thence too much effervesce through the febrile and poisonous ferment; such altering Remedies surely are to be used, as not only fix and precipitate the febrile ferment, but also withal resist its malignity and are Alexipharmack.

Hitherto of the formal cause of Alteration, its Efficient cause is next to be inquired: and we determine it to be the fermental heat of the *Viscera*, that by the help of altering Medicines, which also have their ferments, subdues the morbifick matter, transmutes it, and in due manner afterwards expels it: for if the vertue of this fermental heat, and its Balsamick saltiness by chance be altered, or suppressed, or otherwise become weak; being changed, increased, or restored by the said Alteratives, it can easily afterwards subdue and conquer the vicious matter, that is, make it so fluid, that it may afterwards be thrown off without difficulty.

Therefore we must inquire how alterative Medicines, as to their internal vertues, and their very Nature and substance, are with respect both to the ferments of the *Viscera*, and also to the morbifick causes and *Archeus*.

Now we must know that Alteratives perform their Offices by qualities either manifest, or occult. The manifest operate by means of a certain Precipitation, taken largely, only as it denotes dissolution, and such a disposition as is not procured without a previous destruction of the morbifick ferments, (the natural ones being restored by the ferments of the Medicines,) a taming of the Humours produced by fierce ferments, a division of the continuous and heterogeneous, a segregation of the contiguous, and on the contrary a congregation of the homogeneous, lastly without a strengthening of the whole Nature: For the furious ferments of the Humours being destroyed and extinct, and the fierceness of those things produced thereby being mitigated, the activity and vertue of the Natural ferments that before was languid, being assisted by the ferments of the altering Medicines, do emerge again as it were, by promoting the subduing of the morbifick matter, so that the fierceness of the turgescency being in a due manner plainly depol'd by precipitation, the matter can easily afterwards be cast off either sensibly by stool, or Urine, or sweat, or insensibly, whence Nature recovers her strength again, which before was discomposed and oppressed: for the Humours themselves, as such, are not always the causes of diseases, but some malignant ferment in them and naughty disposition of the Humours which even in a very little quantity has great vertue; and if this ferment be extinguished, and this quality removed, the diseases cease. For we think that all progress almost of diseases is owing to some vicious rise of ferments: for these either springing in the *viscera* appointed for chylification and sanguification, or being carried to the whole mass of Blood and other parts under the cover and shew of aliments, what tragedies do they raise! what Stirs! but now the extinguishing of these presently in the bud gives a joyful hope of health. Apoplexies, Epilepsies, want of appetite, crudities, &c. proceed from the corrupt ferments of the digestions; and when the mass of Blood is sometimes too much exalted, boils in the

Vessels, and Fevers of divers kinds and natures are kindled thence, this sometimes proceeds from febrile ferments; but sometimes the febrile ferments themselves are the products of a spontaneous effervescence of the Blood.

The reason why an acetous and fowry disposition is often induced on the Blood (such as is in the Scorbutical, Hydropical, Cachectical, and those that labour of other Chronical diseases) is the acid and Saline nature of the ferments; and in the destroying of these consists the whole reason of the cure; whilst these last, the diseases continue; and because of these, Purgings and Bleeding only are to no purpose, for the Patients are macerated with purgers, unless these be chiefly taken away in the first place. For it is always better, says Sennertus, that vitious Humours should not be generated, than that they should be evacuated when generated. Thus (for example) in the cure of all Fevers, before all things the febrile ferments, (the next cause of the ebullition in the mass of Blood) as most urging, are to be fixt and precipitated by Specifick antipyreticks, Diureticks and Diaphoreticks that imitate Nature, which having extinguished the febrile ferments may afterwards withal resolve the vitious matter produced by them, and having resolved it, may separate it from the mass of Blood by convenient wayes: and when at length the febrile ebullition of the Blood is allayed and the paroxysm banished, then the occasional febrile cause is by a methodical cure to be removed by purgers, and a relapse to be prevented. The Method is the same in Chronical diseases; which although they have taken firm and strong rooting in the Body, with obstructions of the *viscera* from serous crudities every where collected, and the balsamick saltiness of the Blood turn'd into acetous and fowry, yet are to be cured by precipitating Alteratives, which may tame the Humours tainted with morbifick ferments, may resolve them, and the dyscrasie of the Blood being amended and the obstructions of the *Viscera* unlocked, may consume and cast them out.

Now Alterative Medicines do perform this precipitation either in a privative or a positive manner. Of the former sort are those, which not only make a fixt of a volatile, and a volatile of a fixt, but also of an acid a sweet, of a bitter a Salt, of a Salt a bitter; yea and also by imbibing the preternatural and acrimonious Salts, cleanse the Blood, and correct the depraved ferments of the *Viscera*, and so stop the preternatural fermentation of the Humours. Such kind of Medicines are resoluble, hungry and thirsty, easily imbibing acid corrosive Salts, and when they are filled and have done their business, depart; and they act partly by way of Alteration acquired in a possibility of their own, partly by changing the internal qualities of those, and such as descend from the specifical quality.

How this is done, the more intimate Skill of Spagiricks demonstrates: for he that understands the dulcification of Salts thoroughly, knows very well the reason of this also. For the Alterations that happen in the vital oeconomy from vital principles, depend not on the fire or cold of the Body; heat and cold are accidents not belonging to the nature of Diseases. Thus a Thorn being prick't into any part, in an instant there follows pain, to the pain succeeds the pulse, from the pulse an afflux of Blood, whence ensues heat, a tumour, an aposteme, &c. the thorn therefore moves the other things after it: Now the metaphorical thorn of Diseases is the strange ferment conceived in the *Archeus*, or other foreign acids, ponticks, corrosives, &c. which if the *Archeus* drive or deposit into the mass of Blood, what disturbance is thereby raised! So in the Liver there are often felt preternatural heats, but all these are caused by means of the wild acid Salts, which ascend the *Archeus*, &c. says Helmont, lib. potest. medicam. §. 20.

Seeing

Seeing every thing acts not upon every thing, but upon something determinate, nor every thing suffers not from every thing, but from something determinate; so also every Morbifick matter being furnished with its own peculiar Ferment, cannot indifferently be dissolved and precipitated by any one, but only by its own appropriate precipitating Medicine. For it is not enough that attenuating Remedies be opposed to thick and viscid humours, and incrassating to thin; but their Nature also according to the diversity of the figure of their Parts with their specifick Ferments is to be heeded, and specifick and proper precipitating Remedies are to be used, Alkali's for Acids, Acids for Alkali's, Sulphureous for Sulphureous, &c. Whence *Walaus* says, that *Alteration is made by Conjunction and Perfection: Hence if altering Medicines ought to alter, they must needs be mixed with the humours that are to be alter'd; if they would be mixed thoroughly, they must be like the humours, not in respect of their qualities, for so they should be contrary, but in respect of their Constitution: Therefore what things are oily in our Body, let those be alter'd with oily Medicines, what are watery with watery, what are acid with Alkali's, what are Alkalizate with Acids, &c.*

When thick, viscid and acid humours produced from the vicious Ferment of the Stomach; or from the depravation or corruption of the Chyle; stick close in the coats of the Stomach, then those Remedies are to be opposed to them, either that abound with a volatile aromatick Salt, such as is in Wormwood, Aron root, Centaury, *Cardus Benedictus*, &c. or that are endued with an Alkaline fixt Salt, or a volatile lixivious, such as are the Salts of Wormwood, Ash, Succory, the volatile Salt of Hartshorn, the volatile Salt of Tartar, &c. As also if this acid Crudity be after a sort volatile, and exalted by a fermental humour; so that it penetrate even into the mass of Blood, it is fixed and changed not only by all fixt Alkaline lixivial Salts prepared from Plants, but also if there be need of greater penetration, by other alkaline volatile Salts, such as the salt spirit of Sal Armoniack, of man's Blood, of Hartshorn, &c. with which effervescing it is in some measure temper'd, coagulated and made neutre. Moreover for this purpose serve also Crabs Eyes, red and white Coral prepared, *Spodium*, Mother of Perle, Perch-Stones, &c. all whose alteration is of a middle sort betwixt the stronger effervescence that arises from the aforesaid Salts, and the concentration or fixation made with the aforesaid Alkali's.

If the Ferment of the Stomach be filled altogether with sulphureous and bitter Excrements; so that it efflate too much thereby, and a nidorous crudity spring thence, acids are to be given, of which sort are *spiritus vitrioli Martis*, *salis striatus*, &c. the juice of Citron, Pomegranat, Corinths, Berberies, &c.

To correct a lixivial Alkali abounding in the first ways, whereby driness of the mouth and thirst is too much encreased, acids also being taken are profitable: also Emulsions made of the four cold Seeds. (See the Title of *Sitis*, Thirst.)

Where the Ferment of the Stomach is very weak, or departs too much from its acid Salt volatil Balsam, those things are to be given that supply its place, such as are volatil acido saline Salts, volatil acid Spirits; of which number are the fixed Salt of Hartshorn prepared with the Spirit of Salt, or the *terra foliata* of Tartar, *D. Mabius's* aperitive tincture, *Arcanum duplicatum*, &c. For these are the genuine wakeners or excitors of the Ferment of the Stomach and of the other *Viscera*; they do withal cleanse away the filth of all the Digestions, resist Putrefaction, unlock long-continued Obstructions of the *Viscera*, and exterminate from the vital jurisdiction divers inveterate kinds of Fevers, and other Diseases that arise from thence.

The defect of the fellous Ferment is made up

by bitter things, as Wormwood, Centaury, Agri-mony, *Card. Ben.* Fumitory, and the roots of Succory and other Aromatick bitter ones: Its excess is corrected by the acids reckoned up above: For the Fermentation of the bile, unless it be in a right state, gives occasion to divers Calamities in the windings of the Guts.

When the Sulphureous part is sometimes exalted in the mass of Blood from a febrile Ferment, and is too luxuriant; and the *Crafts* of the Blood perverted from its due state, so that it is all in a flame, hot and boiling, then that febrile Ferment, as the most urgent, is first to be destroyed by precipitation: which is done in intermitting Fevers by tartareous Medicines, by lixivial Martials married to acid Spirits; in continual, by *Bezoardicum f.* and c. of Gold and Steel, which do wonderfully bridle the ebullition of the Blood; whose vertue arises not only from the Antimony and *Mars* and *Sol*, but also from the Spirit of Nitre, which is fixt abundantly in these (which the increase of the weight teacheth) its refrigerating and Anodyne vertue remaining safe (which is known to few) which yet is made more apparent when all the Nitre is turn'd into a most white Earth, by the operation declared by *Helmont*. *Poterius's Alexipyretion* that springs from the same Fountain, is no less powerful. Now the cause of that ebullition is a febrile and poisonous Ferment; which being removed, the Disease is most quickly and safely banished: But this is done neither by Purgers, nor by Bleeding (which two are Impairers of the Faculties) but by specifick anti-febrile Remedies (that fix the febrile matter,) by Diaphoretics and Diuretics: to which if specifick Alexeteries be assisting, you have a true Alexipharmack not only of all malignant Fevers, but also of the very Plague it self. In the mean time the febrile *assus* or fervour is to be demulced with the acid Spirits of *Mars*, *tin-ctura Bezoardica*, Gelly of Hartshorn and Ivory, with the Juices of Pomegranats, Corinths, &c. the tinctures of Roses, Violets, and Borage, prepared with the Philosophick Spirit of Vitriol and a little of the Spirit of Raspberries, &c.

When the saline Parts in the Blood, through bad digestion and fermentation are not spirituous enough nor are rightly exalted, but remain crude and fixt, are at their own liberty and suffer a *fluor*, the Blood not only becomes thick and unfit for Circulation, but acid also, austere and acrimonious, so that it is thereby corrupted, and being coagulated breeds Obstructions in the *Viscera*, and tartareous crudities are every where heaped up, from which proceed the Hypochondriacal Distemper, the Scurvy, running and fixed Gout, Stone, Dropsie, Leprosie, and most Chronical Diseases. In this vicious disposition those Medicines are good which exalt and volatilize what is fixt, and promote an insatiation in the whole mass of Blood. In this case Evacuators profit nothing at all, but by depauperating the Blood more, waste the faculties without remedying: those Medicines avail more that are fill'd with a temperate and mild volatil Alkali, such as Stone-crop, Fumitory, Germander, Centaury, Celandine, Scurvigrass; and the more penetrating, as the salt Spirit of Sal Armoniack, of Hartshorn, Soot, Man's Blood, Hart's Blood, the volatil Salt of Tartar, *Arcanum tartari* with the volatil Salt of Vipers, &c. respect being had to the circumstances, are of notable use. Hither also are to be referr'd Decoctions of Roots and Herbs impregnated with a volatil lixivial Salt; so that the more excellent these are in this degree, the more easily and plentifully also do they correct the preternatural acidities in our Body. Preparations of Steel and Tartar give great hope of Health here also: for these, besides that in the Stomach, the Fountain of Digestion and

Archive of Life, they correct and prepare the said

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said Acidities, which otherwise might be hostile in the habit of the Body; they also imbibe and precipitate the wild Salts in the Blood, and withal unlock the Vessels that are here and there obstructed.

Precipitating Medicines work after a *Positive manner*, while they are spirituous and have a singular Balsamick vertue; by the benefit whereof they so strengthen the power of the Natural Ferments, and their innate Balsamick saltnefs, that Nature her self can now again rise up against the Crudities, and digest, or precipitate or separate them. After this manner ought the universal Remedy to operate if any had it: or for want of it, other comforting Spirits reduced to the greatest volatility.

Maurit. Hof-
man, Meth.
Med. lib. I.
c. 19.

Anodynes, Narcoticks.

(See *Hypnoticks*.)

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I. **T**hat we may the better proceed in rehearsing these, it is necessary to premise a distinction betwixt internal and external Anodynes; for according to the place of application, does their manner of working vary also: Both of them indeed loosen the tension and vellication of the Membranous Parts, but after a much differing manner.

II. For outwardly this is performed, 1. By *Emollients* (that are such as to their operation) whether they be *Mucilaginous* things, whence a cheap and familiar Poultice in all Pains is made of the crumb of white Bread, Milk, Saffron, the yolk of an Egg, &c. So live-Earth worms being applied do notably assuage the Pains both of a Whitlow, and also others of the Nervous Parts; on which account I have sometimes cured the greatest Pains of the Back only by bruising and applying these: Or watery *sepsids*, or hot and moist things; so Baths, Fomentations, and the like Topicks do loosen and digest by a kindly warmth, and so do egregiously demulce: So Hippocrates in a Pleurittick pain applied warm Milk in a Bladder to the aking side; for although the vertue of the Liquor cannot thoroughly

reach this Membrane, yet neither is there need of it, for it suffices that a kindly warmth may on this manner be continued for some while, and so affect and demulce for some continuance the pained part: Or fat things, all of which do this, unless something hinder their Application; so the common Anodyne Ointment consists of meer fats; so the yolks of Eggs are deservedly reckon'd among these Anodynes. I say all fats are good for this, and it is all one almost which you take, for there is hardly a farthing to chuse.

III. 2. By Medicines *repelling and hindring the afflux of humours*, which, as the former demulce, so do these dull the sense of the Part: Hither belong all that are actually and potentially cold, as for instance, Bartholin relates that the Colick was cured by applying ice, for the heat is thereby concentrated, and the consequent irritation and intension of the Pain remits.

Tract. de
Nive.

IV. 3. By *digesting Remedies*, which have a gentle vertue of heating and dissolving, and strengthen the Native heat, and procure the dissipation of the viscous matter through the opened Pores; and these are properly *Paregoricks*.

V. Hither belong (*in specie*) *Nervine Medicines*, which by their Balsamick vertue are grateful to the Brain, and demulce the Part, and take away the preternatural acrimony; whether they be *spirituous*; thus Pains are often driven away only by Brandy; or *urinous*; so Spirit of Sal Armoniack either by it self or with Spirit of Wine eases Pains; so the Spirit of Hartshorn, the volatil Spirit of Earth-worms and the like, do greatly assuage Pains of the Nervous or Membranous Parts; or *mixts*, such as our renowned Nervine Liniment of *Aqua Magnanimitatis*, the volatil Spirit of Earth-worms, and of Hartshorn or Armoniack conjunctly. And these indeed are good in Pains of all sorts, yet not after one manner, nor for all Parts.

VI. Thus the spirituous and digesting, the less fat, and the middle sort of Emollients are more profitable to the membranous Parts and Joynts: So Emollients are more convenient, where the ways are to be loosened withal, as in the Stone, and in Inflammations that tend to Suppuration; digesting and spirituous where we would discuss more: So Repellers are more convenient in safe and dry places, as the Head; but less, in the soft and moist, as the Breasts. Seeing therefore there is a great latitude of these, Anodynes are to be discriminated well, and varied according to the nature of the Parts and Diseases, in which very thing a Physician differs from Mountebanks and the vulgar, who whilst they would do good, do a great deal more hurt. But we must note for the Explication of these things,

VII. That *Opium* is more convenient inwardly than outwardly; not but that it may be applied this latter way, but because it chiefly respects the cause, it is generally used the former: And if it be used as a Topick, it acts no otherwise than by demulcing, digesting and mollifying, and by communicating part of its *Effluvia* to the Blood: but the rest that we have reckoned up are rather applied outwardly.

VIII. Narcoticks (except the actually cold) being applied outwardly, take not away the sense of the Part; they repel not, but discuss, mollifie and digest; for that hypothesis of the Ancients was false, that determin'd Narcoticks to be cold, and that by the application of them the sense of the Part is intercepted, taken away and dies: which is against Experience; for *Opium* being applied and worn for twenty four hours or more, is so far from taking away the sense, that it rather mollifies. Hence Henbane being boiled with Milk does greatly assuage scorbutical Pains, but it does it chiefly with its mollifying and digesting vertue; in like manner we have seen a Plaster of Henbane very much to help

help Pains, to discuss, and promote Suppuration as there was occasion. There is the same reason of Hemlock; whence it is vainly objected by some, that the use of the Plaster of Hemlock is not safe in a *Scirrhus* of the Spleen, because it rather congeles. Therefore that Hypothesis is to be turn'd out of the Medical Court; and yet it is not to be denied that a Sulphur, which they call Narcotick, is found in these very Medicines, which is communicated to the Blood partly even in outward application.

IX. External Narcoticks and Anodynes that assuage Pain, do also by accident procure sleep; but (except those of Poppy) they are not equally used for procuring sleep: but Opiats do both. For where Pains cause watchings, when those are removed, these also by the same means are taken away: But it is unlawful to give Hemlock, Henbane, or Mandrake inwardly; for they contain a Sulphur that is impure, indigested, inimical to Nature, not kindly. Now to internal.

X. Anodynes and Narcoticks differ only in degree; but neither all Anodynes nor all Narcoticks are Hypnoticks: For the binding of the sense, which is properly called *Narcosis* or stupefaction, if it be meant of inward Medicines, is owing to the binding of the Animal Spirits, so that they do not flow into the Parts, but are detained by a Narcotick vapour as by a band; so that internal Anodynes by increasing the Dose may be made Narcoticks; and on the contrary.

XI. Yet there are some Anodynes that are not equally Narcoticks; such as do indeed mitigate the acrimony of the Humours, and take away the Pains that depend thereupon, and by accident also sometimes procure sleep; but they cause not sleep by a primary intention, as for instance the Anodyne Sulphurs (commonly called Narcotick) of Metals and Minerals, such as lodges in native Cinnabar, of which I have seen some notable Effects, that the aking of the Teeth, Head and other Nervous Parts has been stopped thereby, whence Cinnabarines are good in all great Pains, as taking away the tension and twitching of the *genus membranosum*; and absorbing and precipitating the acrimony if there be any, and so they are most convenient in the Gout, Pleurisy, Stone, &c.

XII. That the manner of the action of somniferous Medicines in specie, or of these Narcoticks in general, and especially of Opiats may appear the more clearly, we say that it consists not in a Salt, nor a Mercury; but in a Sulphur, and that 1. indeed kindly, and 2. easily resolvable: I say in a Sulphur; which is clear in the Inflammability, fatness, smell, &c. of Opium, Saffron and the like; also from the Oil which it is easy to draw from them by Distillation; and that kindly, that we may remove all those from internal use that are not endued with such an one, but an immature, indigested, fetid one, or one that is inimical to Nature; notwithstanding that these very things by this very Sulphur are apt to induce sleep, yea death; and easily resolvable both in it self, and also in respect to the Body: In it self, inasmuch as such Medicines have withal either a volatil Salt, as Opium, Saffron, whence arises their resolution in the Stomach, or Exhalation, and their quicker evaporation, and easier communication to the Blood; or a watry vehicle, as Emulsions, Brandy; for it is very well known, that by these two chiefly is Sulphur unlocked, expanded and resolved, and consequently gains its activity, &c.

XIII. None of the Anodynes is more famous than Opium, this is the first and last of all, with which alone the Physician may be content, if he know how to use it; whence with good reason Willis hath asserted that Medicine cannot want it: Sylvius was wont to say, he had rather be no Physician than want Opium; and Platerus said once by

Hyperbole, that though a man were broken on the Wheel he could by his Opium preserve his life, meaning that there is no Pain as it were which gives not place to it.

XIV. Opium assuages Pains not palliatively; but truly. Some Physicians are too scrupulous in this case, who always cry, the Cause; the Cause is to be taken away, and that it is contrary to Method; to seek to remedy the Symptom of Pain by Opiats; that will last but a little while: For indeed Opium does greatly demulce the acrimony of the Humours, and keep the Morbifick matter in the centre as it were, and grants rest to Nature: whence the reason why it does not allay Pain alwayes alike and thoroughly, is not to be ascribed so much to the Medicine as to the plenty and acrimony of the Morbifick matter, which we must help by other hypnotick Remedies also.

XV. Nothing cures Fluxions of the Serum and Blood so well as Opium: Hence in Hemorrhagies of the Nose or Womb, Spitting of Blood, Loosness, Bloody Flux, Catarrhal Fever, it incrassates and concocts, it moderates and bridles, so that the violence of the rushing Humours is stopt as it were and tied. Nor hinders it that Opium is hot, seeing this very thing is not to be ascribed to the first qualities, but to the manner of mixture.

XVI. But as it is more convenient for thin, volatile, watry, acrimonious and fluxile Humours, so is it less convenient for thick, viscid, flegmatick and fixed; for it fixes and incrassates these more; whence in a confirm'd Dropse Opiats are very hurtful, and Death comes on the sooner by this means, for the plenty is greater, the resatiation greater: whence we must note also in general, wheresoever there is great plenty and resatiation of Humours, there Opiats do more harm than good, for they bridle their motion the more, and make them not fluxile: hence in Diseases of the Breast, if a greater plenty of Humours obstruct the Pipes of the Lungs, and require to be expectorated, as in the Pleurisy, Asthma, &c. Opiats promote the Suffocation: the same holds in a Cough, Pains of the Stomach and others.

XVII. Whensoever Serum is wanting, Opium is either not to be given at all, or not but with Moisteners; nor in malignant Diseases; but with Bezoardicks: hence it is used in vain to procure sleep in old Men: (See tit. of Hypnoticks.) But in all malignant Diseases, when the Pain is more vehement or the Flux greater, it operates safely and pleasantly alone: but when there is only want of sleep, it is fitly joyned with Emulsions and other Bezoardicks. Yet it self is not the meanest among Alexipharmacks, as may appear by Treacle, *Diastordium*, and almost all other Antidotes; whence also liquid Antidotes, Bezoardick Tinctures and Mixtures are fitly compounded with Anodynes, only diminishing the Dose.

XVIII. Opium is an excellent Sudorifick: We have hardly any Diaphoretick so certain, so faithful and as it were so properly called so, as Opium; yea (which are the words of *Walsus*, *m. m.* Pag. 61.) the reason why Treacle or Mithridate move Sweat, is wholly from the Opium that is mixt with them: I have tryed (adds he) these two Electuaries prepared without Opium, and they have not caused Sweat at all. Whence it does not only increase the vertue of Sudorificks when it is mixed with them as aforesaid, but also being given by it self alone, it for the most part procures a gentle and dewy Sweat: So that from all these things it is clear, that in the use of Opiats the greatest respect is to be had to the Serum, that the Sulphur of the same may be resolved and deduced into act.

XIX. It is better to fail than to exceed in the Dose; but to keep the mean is safest in our practice: We have noted that two Distinctions are necessary about the giving of Opium: 1. Between the ordinary and extraordinary Dose: Opium being left to it self, and not

increased in bulk by the unnecessary addition of superfluous Ingredients, may fitly be given ordinarily from a third or fourth part of a Grain, to one, two or three Grains; and in this manner it does its office very well, if so be the degree also of the Indicant and Prohibent be diligently heeded. But when Pains are very urgent, and the quality of the Blood is very acrimonious, &c. Custom and the like circumstances varying, one may ascend higher, which extraordinaries make not a rule. 2. *Between the first and secondary intention*: So if we would only stop Pain, watchings or urgent Fluxions, there is need of the larger Dose; if we joyn other Medicines to it that are moistening, adstringing, absorbing, febrifuges before the Fit, &c. it is given in a smaller Dose, as but half or a third part. The first intention is to be answered ordinarily about Night, and but seldom; the secondary at other times, and oftener.

XX. It is often better to use it inwardly even for an external Malady: for that is the nearest way to actuate it; whereas to apply it outwardly is about, and less safe or faithful: Thus in Pains of the Teeth it is often better to swallow an Opiate Pill, than to apply it to the Tooth it self; though I do not so readily believe that some have died by the use of it this way, as Authors relate. So it is better to omit *Opium* in Clysters, especially seeing all Clysters are foreign to the Guts, nor does the acrimony of the Humours or the Pain equally abate this way, an Error that has sprung from a false Hypothesis of the activity of *Opium*: Otherwise it is used safely indeed in Plasters and Ointments, but there the reason of its working is far other, as was said above.

XXI. Opiats are not good when the Patients are very weak: They profit indeed the weary, and the pained, and refresh the weak; but if their weakness be in the highest degree, they do not do so: so if they be given when Death is at hand, they hasten it the more. So neither must they be given when Labour in Childbirth draws on, for that Pain is rather to be promoted than stopped, although for another reason they may be given. So particularly they are to be administered more warily in weakness of the Stomach: But then this is to be understood of the primary Dose, not of the curtail'd; which being observed, the Faculties may far more easily be restor'd and recover'd by renewing sleep, allwaging Pain, and checking the impetus of the Humours: On the contrary if when the Spirits are exhausted and spent, the remainder be tyed, Death ensues presently.

XXII. For easing the greatest Pains, where digesting Anodynes being first applied have done no good, let the pained Part be hastily touched with a Bladder full of cold Water, and let the Bladder be removed again without delay, and repeat this twice or thrice: this is the advice of *Hippocrates* and *Sanctorius*: for a moderate torpor has a virtue to cure Pain: and then the application is made more conveniently in a Bladder, because the pained Member is not offended by the moisture, which perhaps might do it harm.

XXIII. Oil of yolks of Eggs and of sweet Almonds is not to be drawn out of the yolks or Almonds burnt (which some Perfume-makers do, that they may draw the Oil more easily and plentifully) but they are only to be gently warmed, and then the Oil to be drawn out of them with that diligence that is necessary: For indeed by burning of them, the Oil is easily drawn, but then it is sordid, stinking, and very unfit to allay Pain.

G.W. Wede-
lius de Simpl.
Med. Fac.
p. 292.

Fabr. Hild.
I. de Gan-
græna c. 24.

Aperients, or Openers.

(See Obstructions, Book 13. and Preparers below.)

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I. A Perient, resolving, attenuating, inciding, and absorbing Medicines, all serve the same end, for some of them only express the manner of acting more: Their virtue namely and manner of acting consists principally in the thinness of their Parts: Aperients are endued with Particles that incide, are acute, penetrate and loosen the Passages, whereby they procure Motion to fixed Humours, and make way for themselves to pass by. But secondarily they ought to have a moderate thickness, that their virtue may not so soon expire or dissipate, which that of Rarefiers does, which are more proper for what sticks in the Surface and Pores, for they loosen the Pores and fuse the Humours: Hence bitter things are of great esteem among Aperients, because through their earthy Parts they strengthen withal: For it stands for a rule, That those Aperients are the best, which strengthen the Parts and Fibres withal, and do not induce a loose tone.

II. And these are the Aperients properly so called, or rather of the first class, namely of the volatile. But besides these there are others that absorb and resolve, not as if they were endued with thin Particles, and so penetrated by their own virtue, but because they absorb or drink up the coagulum that fixes the Humours as it were, and for the most part is an acid, pontick and sower quality, whence the Humours are sweetened as it were, and consequently do not restagnate in their Receptacles or Channels, but pass readily to and again, and are either circulated or cast out.

III. The Universal and as it were common Indicant therefore of Apertion (I mean common to the Vessels and Pores obstructed, and to the matter obstructing) is 1. Somewhat obstructed; and so hence Aperients, in a great latitude, are

are convenient for all obstructions in general: For example, for an obstruction

IV. (1.) Of the *Viscera*, as of the Liver, Womb, Kidneys, Spleen, Mesentery: where it is to be noted that those *viscera* are more liable to obstructions that have many vessels, as the Liver and Spleen especially.

V. (2.) Of the *Vessels*, as of the *Veins* and *Arteries*, which are like pipes or channels: Whence as, otherwise, waters in pipes do by little and little deposit that slimy matter wherewith they abound, in the pipes they pass through, and fix it to their sides: so it is in the *Vessels*; whence we see that those whose *Vessels* are obstructed have their pulse increased, and that the Blood is moved the quicker, because the space it moves in is narrower. Also for obstruction of the *Nerves*, as in the Palsie, where those *Nervine* Aperients are fitting, that open the obstructed pores of the *Nerves*: Also of the *salival* and *lymphatick* *Vessels*, &c.

VI. (3.) Of the *meatus* or *passages*, as that of the Gall, of the Intestines, of the Ureters, &c. whence they are proper in the Jaundice, Colick, Stone, &c. where we must note by the way, That all Persons troubled with the Stone are also Hypochondriacal, or abound with a tartareous or obstructing matter in their Blood.

VII. 2. Somewhat concreted or tartareous does indicate Aperients, when saline, tartareous and earthy Humours cause obstructions, in which case they are properly called *Resolvents*: Whence in the Stone, Scurvy, or the Hypochondriacal affection they are the only Remedies; whether the concretion and coagulation be *in fieri* (or but a growing) whence in clodding of the Blood, palpitation of the heart, Swooning, Fainting, a *polypus* of the Heart, &c. they are good: or *in facto* (when it is completed) as in inward Abscesses, Pleurisie, Apostem of the Liver, &c. also in a fall from some high place, and in Wounds inwardly; whence most Antipleuritics and Antitraumaticks are withal *Resolvents*, and in a Pleurisie the same things are convenient as in a fall from on high: so also these *Resolvents* on this account are good in spitting of Blood, if they be join'd with *Astringents*.

VIII. Now subject to this sort of concretion are either *Humours*, viz. Blood, Choler, Serum, Urine, Milk, whensoever they restagnate, and are moved without their proper sphere as I may say, or are out of their Element: or *flatus* or wind; whence *Resolvents* are also very good in flatulent Distempers.

IX. Aperients are indicated 3. by somewhat thick, viscid and clammy, whether that be meant of the bile, when it becomes sluggish, puts off its proper nature, and loses its salino-Sulphureous, kindly and balsamick acrimony; or of phlegmatick, cold and moist juices; whence in an *Anasarca*, thick Catarrhs, ill habit, glutinous stone, the Stomach fill'd with Phlegm, &c. they are good; in which case they are particularly called *Attenuators* and *Inciders*.

X. Now although thin Humours also may often seem to offend in obstructions, as in the Scurvy and Hypochondriacal affection, yet they are thick privately and in their retirement; and besides the Saline volatile Parts there are also others; whence the Symptoms vary widely: thus Serum or Lympha, so long as it is in its own Sphere and under the dominion of the Natural heat, appears thin, but when it slides out of the Vessels or out of the Body, it waxes thick, as is seen in Catarrhs. Thus Aperients of this sort, especially volatil, are good in the Apoplexy, when the original of the Nerves is obstructed: also in stoppages of the Nostrils, in intermitting Fevers or Agues, in straitness of breath, &c. And in this case Purgers also are excellent, seeing all of them have a saline melting Spur in them.

XI. Aperients are indicated 4. by somewhat acid, acrimonious, austere, sour, pontick, when namely, the Blood is fixed as it were by a preternatural acid, when the juices are constringed by austere particles, so that the Blood circulates not orderly, nor its volatile Parts meet and part freely. And in this case they are commonly called absorbing, saturating and precipitating Medicines: Whence also appears their very large use; as for instance, in vertiginous Distempers of the Head, in the Epilepsie, Apoplexy, Palsie, opening and absorbing Cephalick Cinnabarines are good, especially those that make the Blood fluxil, and for this very vertue are very comprehensive; they are also profitable in Diseases of the Joynts, Hip, Womb: also volatil Salts, both alone, and also when made more oily: So in Diseases of the Liver and Spleen, yellow and black Jaundice, Scurbus, Dropsie, ill habit, and especially in the Hypochondriacal affection and Scurvy, the same Medicines do the business. For if it be asked, How Medicines of Steel act, and open? 'tis very well answer'd, By absorbing, just as Spirit of Vitriol, Nitre, Salt, or aqua fortis it self being poured on Steel have their acid particles infringed, are saturated, grow sweet and turn to Vitriol: for thus it is in the Body; whence Corals also are commended by Glauber as an excellent Medicine in the Hypochondriacal affection, taken to a scruple or half a drachm; Thus the same are good not only in these affections, but also in the Nephritick.

XII. And these very Aperients consider'd generally act two wayes, 1. by altering, so that they correct the offending matter it self, and re-establish the ducts, passages and vessels; 2. by evacuating, in which regard Purgers also themselves are excellent Aperients, for they also are indued with subtilty or thinness. Hence is the practical rule, In obstructions of the viscera we must not only open, or not insist upon Aperients only, but must also evacuate, that that which is opened may be evacuated. And in chronical Distempers these are to be used by turns, first we must open, then Purge, and then again continue Aperients: And this also is to be observed, that Aperients being added to Purgers encrease their vertue.

XIII. Now Aperients themselves are of divers kinds; and as Montanus and experience testifie, in general, most of them exceed not the second degree of heat, and they ought withal to be endued with a thick, strengthening, earthy substance, that their heat be not so soon dissipated.

XIV. In Aperients the active principles are predominant, especially a fixed Salt and the Mercurial principles; and aeral parts are mixt with the earthy; and they are (for instance) 1. *Acrimonious*, either with an aromack energy, or with the vertue of a volatile Salt, as the five opening roots, the roots of Burnet, Aron, Antiscorbutick plants, Mustard, the Arabian costus, &c. 2. *Aromack* and oleous volatils, as Menth, Pennyroyal, Cinamon, cubebs, costus, Mace, carminative Oils, volatil Salts, oleous, Antiscorbutick Spirits. 3. *Bitter*, as the roots of Cichory and Gentian, Worm-wood, Agrimony, German-der, Gum Ammoniack, Aloes, &c. 4. *Acid*, as pickled capers, the volatil Spirit of Salt, of Nitre, of Tartar, the Glyssus of Antimony, which penetrate notably; the juice of Citron, the Cream and Crystal of Tartar, mineral waters call'd acidule. 5. *Watery*, which dilute, temper and yield a vehicle, Whey, distilled waters. 6. *Absorbing*, fixed and lixivial, as the Salts of plants, the Tincture of Tartar, which cleanse notably, and purge the filth out of the veins: Also earthy, whether alkaline, as Ceterach, Liver-wort, Crabs-eyes, Corals, Tartar vitriolate; or vitriolate, as vitriol, vitriolum Martis, crocus Martis aperitive, the filings of Steel in substance; tinctures of Mars. In short the most select Remedies of them are comprehended under a quaternary number, and are either Martial, Tartareous, Vitriolate or Antimoniate.

XV. So

XV. So also all *Diureticks* are aperient, which are chiefly profitable when there is obstruction in the upper part of the Liver, and when the malady is throughly wedded to the Blood.

XVI. Now Aperients and Resolvents are more proper after *Universals*, for otherwise the Humours are rather fixed and driven further in, than the coats of the passages and vessels freed: hence both purgers are convenient and also Blood-letting, which is often very profitable in a great obstruction, if there be present also a fault in the Blood.

XVII. We must not insist only and continually on Aperients singly, especially volatil, but strengtheners are to be intermixed; otherwise the tone of the parts will be violated, and the Body will be precipitated to a bad habit: hence the hypochondriacal often use them in vain, if they neglect tonicks withal; and those mistake far more that by using volatil Spirits continually, strive to overcome obstructions by them only.

XVIII. There are to be mixt with Aperients such Medicines also as respect the part affected, that the native heat of the parts may be preserved; so Cephalicks are to be used for the head, &c. Thus as by the obstruction of the Kidneys a stone is bred, so Aperients are good for it, but such as dissolve the *coagulum* withal.

XIX. Let them be given on an empty Stomach, not with meat, nor presently after: for in general, aliments are not to be confounded with Medicines; and in particular, Aperitives, because they precipitate the chyme into the lacteal vessels and so increase the obstructions.

XX. Before all things we must see that they dry not too much, whence moistening or liquid Aperients dilute and temper more, and are greatly to be observed in diseases of the Liver, Womb, and Spleen. I have often observed the contumaciously Hypochondriacal, when they had been in vain long vexed with the stronger and drier Aperients, to become very well upon the use of moistening ones; whence Galenical Medicines are fitly mixed with Chymical: and hence Mineral Waters have their vertue, that they carry the dissolved Salts along with them. But Pills are fitter where the viscera do more abound with excrementitious Humours. To repeat these things summarily: *Aqueous* and *liquid Medicines* dilute and temper more; *earthy* absorb more; *saline* drive more by Urine; *acid* incide more; *acrimonious* attenuate and resolve more; *sweet* cleanse more; *bitter* do more strengthen withal.

G. W. We-
del. de C. m.
f. 43. 1

XXI. In all *chalybeate Medicines* this is alwayes to be observed, that after the taking of them the Body is to be exercised with walking about, that by this means the vertues of the Medicine may be better deduced into act: And that walking is to be continued for two hours: which being over, let the Patient take some broth wherein some opening Herbs and Roots have been boiled.

River. Pract.
lib. 11. cap. 4.

Aphrodisiacks, or Increasers of Seed.

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They take away also impotency caused by Witchery, VII.

I. *Aphrodisiacks* are either 1. *strengtheners* or *increasers* of Seed *substantially*, Spirituous restoratives and helpers of the native heat, aliments of good juice, of easie digestion, and of much nourishment. Of Medicines some may be referred hither that respect the slippery and frothy character of the Seed, as the root of Satyrion and other bulbous roots, Artichokes, Ambergrise; *Valleriola* commends Cocks stones. And these take place more in old Men, or in such as have weak and few Spirits, as in those that are recovering from Sickness: for as there concur to a fruitful coition both a spirituous, consistent, plentiful and as it were turgent seed, and also a vigour of the Genitals; so the Medicines already spoken of do chiefly satisfy the former requisite.

II. Or 2. *Stimulating*, (1.) *Inwardly*, such as by their heat and chiefly by their acrimonious oleous Salt make the Seed more turgid, spirituous and acrimonious, so that it causes the greater titillation and impetus, and on this account requires an exit; and such also as strengthen the Musculous Parts and serve erection. Such are [1] all *aromata* or spices, and *Balsamick*, *Sulphureous* and *aromatick* things that are of the same nature with these, Cardamoms, Cinnamon, Saffron, Cloves, &c. in particular all Pepper, hence *Solenander* (sect. 4. conf. 7.) gives half a drachm of Pepper with three ounces of Milk and half an ounce of Sugar. Yea *Opiats* themselves are to be referred hither, whether alone or made up into Pills with Musk and Ambergrise; for it is certain by experience that *Opium* is a most approved *Aphrodisiack*, and perhaps can do more than any other, and it is so much the more to be commended, in that it both strengthens and stimulates and hinders the dissolution of the Spirits. [2] *Oleous* and *Spirituous* things; for whatsoever things intend the natural heat or the volatil and Sulphureous Parts of the Blood, the same do also excite Venery, or at least do contribute something towards it, whence *aqua magnanimitatis* comes into this number: *Aqua vite* satyriated, *Aqua vite* of Matthioli, oil of Cinnamon, preparations with Ambergrise, Musk and Civet, *confectio Alkermes* complete, &c. operate this way. [3] Other *saline* and *acrimonious* things that are not aromatical; for as *Venus* is said to be born of the Salt Sea, so saline things do also notably stimulate: *Mercurialis* conf. 48. l. 1. commends *Borax*. Likewise such things as are indued with a very biting Salt, that may be melted into the genital Parts, stimulate strongly: whence *Cantharides* are the strongest amongst these stimulators: so Purgers themselves become aphrodisiack upon the account of this very stimulus: (See *Platerus* lib. *Observat.*) for by the acrimony of the Medicine the seminal vessels may be easily irritated through their vicinity. Or [4] things of a middle nature, for hither belong such as have not so plain an acrimony, and may be referred partly to the alimentary class and partly to the Medicamentous; for example, *boletus cervinus*, (which we have observed to be more dull) an Harts pizzle, the flesh of the Sea-skink: The Indian Chocolad deserves chiefly to be remembered, which both increases Seed and adds a stimulus.

III. (2) *Outwardly*, such as strengthen, heat and stimulate: for example, the express'd oil of Nutmeg, and the distilled oil of Mace, Cloves, &c. *Minsichtus* oil of pissmires, *Cantharides* being warily added. Some anoint the yard with Civet; *Solenander* used to anoint it with Goats gall, with good success, and so did *Schenkings*.

IV. It is commonly reported of *Aphrodisiacks*, that Flatus or wind is necessary to Venery: but though in Boys erection or distension of the Penis may seem from Flatus, and these may concur by accident, yet they cannot nor ought not to be reckoned among *Aphrodisiacks*; those things indeed that excite the Spirits stir up Venery, and so make the

the Seed turgid, but so do not those things that breed or excite wind.

V. Venery is not so much to be exstimulated in old men by peppered and acrimonious things, as the vital vertue to be supported by things that recruit the Body it self; for you shall in vain exstimulate that Seed which is not there: moreover in old men exstimulating Aphrodisiacks do often loosen the Belly, through the consent that is betwixt the Seed-Bladders and the intestins; so that unfortunate old-men-lovers do often upon the taking of such confortatives, with a ridiculous effect filthily beray both their bride and the bed.

VI. Things that strengthen and gently stimulate are fitly mixed with aphrodisiacks; namely so as that the Body be well pamp'rd with good cheer, and such Medicines be made use of as comfort the vital faculty, and yet have a gentle Stimulus withal: whence belongs hither *Electuar. diastyrion*: but we find two Remedies chiefly approved, the one more mild and restorative, viz. *Chocolad*; the other stronger, viz. the *rotulae confortantes* of *Minsicht*: We have observed that confortatives alone without stimulators, or these without those have not had the desired effect. But when we speak of stimulators, we mean those that are gentle; for those that improvidently use *Cantbarides*, are often affected with a strangury and an unspeakable heat of Urine, and a Bloody Urine, the Remedy and antidote whereof is milk and cooling emulsions.

VII. Aphrodisiacks take away also that impotency that is caused by Witchery: In this case indeed there may be exhibited such things as use otherwise to be commended against incantations, especially the essence of *St. John's-wort* taken with the essence of *Satyrion* a little before the Twilight; also other things, as many have been restored by pissing upon new Brooms, or through their wedding ring; the shavings of Goats-horn are good, and also the decoction of *Columbines*, according to *Hartman*, to wash the genitals withal. So we have observed it likewise to be taken away by pissing through the hole in a plank that has been made by beating out a knot in the Wood. But I may self have restored some bewitched and tied up in this manner by Aphrodisiacks alone, particularly by the stimulating *rotulae* of *Minsicht*, and *Chocolad* already commended.

G. W. Wewel, de f. m. fac. p. 220.

Arteriotomy, or opening of an Artery.

The Contents.

It may be safely done. I.

How it may be securely done. II.

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Before an Artery be opened in the Head, we must see whether the fluxion be not by the subcutaneous vessels. VI.

Whether it be more effectual than opening of a Vein. VII.

If an Artery be cut with an hot Iron, let the falling of the Eschar be retarded. VIII.

I. Although this kind of Remedy is almost obsolete in these times of ours, yet it is a very powerful and profitable one, and void of all danger: for only by ligature the efflux of the Arterial Blood is hindered in the lesser Arteries; nor is the Plaster proposed by *Galen* necessary, viz. of bole Armene, Frankincense, Mastich and hares wool made up with the white of an Egg, which yet those may make use of for the greater safety; that are fearful of this opening. The Temporal Artery is

opened as in Phlebotomy, and six ounces of Blood may be taken that spurts out with violence: after which lay on presently your plagets, and let them remain tyed on for four days. By the use of this we have cured the fiercest *hemisrania* or Head-ach, and never found any danger in this opening of Arteries. ¶ In vain, says *Parvus*, has arteriotomy been suspected, as if there were danger that the Blood could not be stoppt, or the orifice healed up again, because of the hardness of the Artery and the continuallness of the pulse, and for fear of an aneurism: but this is the opinion of men that fear all things safe. For we must distinguish between the larger Arteries, which are to be shunn'd by the Physician for the aforesaid dangers; and the smaller, in the cutting whereof there is no fear of danger. Yea of a larger Artery *Galen* (*lib. de f. m. cap. 23*) says, that if it be quite cut through, it may be closed with a cicatrix without an aneurisma; and that doing so has often taken away the danger imminent from a flux of Blood: for it is clear that when it is wholly cut asunder both ends being pull'd back on each side, one retires upwards and the other downwards: and this happens indeed to the veins also, but moderately; but to the Arteries more than to the Veins. And of the difficulty of the coalition he saith thus in the same place: The Nature of an Artery does indeed plainly shew the difficulty of its hard coat's conglutination, yet the difficulty is not such as is altogether invincible: for it is not so dry and hard as a bone or gristle, yea it is far softer and more carnosus than these: and therefore there is less reason to despair of uniting it after it is cut, especially where it self is small, and the Body of the man whose it is, soft by nature.

Lazar. River. Pract. lib. 1. cap. 16.

II. The manner of Arteriotomy deliver'd by the Ancients is so severe and dangerous, that there is none of the Moderns but is displeased with it: yea it had been wholly cast out of the number of Remedies, if the pity and diligence of latter Physicians had not invented other wayes. Surgeons were wont to tie a string about the Neck; but seeing the straiter binding thereof is very troublesome, it is better to make this ligature under the Arm-holes: Let this be so strait that the jugular Veins and Carotid Arteries may manifest themselves, the one by its swelling, and the other by its beating: then press the arterie with your finger, a little lower down than you intend to open it; and having open'd it (which must be done with a slow but steady and strong hand) let it bleed as much as you desire: When the operation is over, sprinkle an adstringent powder upon the wound, then lay a folded linnen cloth upon it, and upon that a plate of Lead; tie both these on with a fit stay, and it will be healed up in five or six days.

Barbette Anat. Pract. c. 10.

III. What Arteries may be cut? The first is the Frontal, that runs along the middle of the fore-head, and is commonly divided into two above, but in the middle has one single notable trunk: this is frequently cut by the Egyptians in an inveterate Head-ach. The second is the Occipital or the Artery of the puppis, opposite to the former, by the Lambdoidal suture, and is opened in the same distempers with the former. Thirdly, the Temporal Arteries are very safely cut in most diseases of the Head: By my advice an implacable pain in the left side of the head was taken away by cutting of these. Fourthly, *Galen* mentions the opening of the Arteries behind the Ears (*lib. de cur. rat. per f. m. c. 22.*) and *Paulus lib. 6. c. 4.* commends it in the vertiginous and such as have a fluxion upon their eyes. But, says *Galen*, 3. de loc. aff. c. 8. it is manifest that all have not been cured by the benefit of this Remedy; for some Arteries that are larger than these ascend to the Brain from its basis through the plexus retiformis, by which 'tis probable such distemper has been caused, a vaporous and hot Spirit being carried through them and filling the Brain: And it may be also that an unequal intemperies of the Brain may produce such a Spirit. Fifthly, the opening of that Artery that runs betwixt the thumb and fore-finger, (that is famous for *Galen's* praises) is good in the pain of the hypochondres,

dres, there where the Liver is joyned to the diaphragm. *Septalius* (lib. 6. animadv. 171. and 172) calls it a most wholsom help in palpitation of the heart. *Alpinus* (lib. de medic. Egyptior. 2. cap. 12.) testifies that the Egyptians cured all the pains of the internal viscera by opening this Artery. Sixthly, the cutting of the Artery that is near the Ankle, is believed to help in the Sciatica. None dare on purpose cut an Artery near the Cubit: for although an Artery cut by chance by a Surgeon that should have open'd a Vein, was healed up again

*Gal. 5. Meth. Med. cap. 7.
Roffine. Met. Med. lib. 4. sect. 3. c. 2.

by * *Galen's* advice, yet the same Physician (lib. de cur. rat. per f. m. cap. 23.) judges such apertion to be dangerous for fear of a gangrene or an Aneurysm.
IV. Whether may we Bleed by an Artery even to swooning? We have *Aëtius* an alterer of the affirmative (*Tetrabib. 2. serm. 3. cap. 9. de arter. sect.*) *We must cut the Artery* (says he) *not aslant but a cross, even to the bone, and most exactly scrape the Membrane that cloaths the Skull, and let it bleed even to swooning; in such namely as are robust and in whom the pain is vehement; for thus you shall destroy the Symptom, &c.* *Galen* favours it also (*l. de cur. rat. per f. m. cap. ult.*) where he relates how upon the cutting of the Artery betwixt the thumb and fore-finger, the Blood issued out so abundantly, that it came to near a pound, which evacuation was followed by a sudden ceasing of the pain, by the letting out the very hot, thin and vaporous Arterial Blood. You will object, though many benefits follow the Bleeding by a vein even to swooning, we must not say that the same follow upon Arteriotomy; for the Arterial Blood that is very Spirituous and the fountain of heat, being drawn in a great quantity, without doubt there must great weakness follow: add to this that life will sooner fail, than any profit ensue from such evacuation. *I answer*: It is not necessary to an Arteriotomy that induces a deliquium, that much Blood be evacuated: for seeing it is Arterial, Spirituous, most hot and thin, if it pass out but even in a small quantity, it induces a fainting, which *Aëtius* presupposes as the limit of this evacuation: Life therefore will not fail before this evacuation happen. Nor do we deny that a too great evacuation does dissolve nature; but it is certain that the faculties are not so much debilitated in cutting small Arteries, in which there is not contained so elaborate and Spirituous a Blood: and though it were so, yet the Remedy is not to be condemned: for there is nothing which profits so greatly, that does not hurt in some regard.

Gal. 11. Meth. 11. Zac. Med. Princ. l. 1. Hist. 43.

V. Let Arteries be cut in the forehead, temples, occiput, hand, foot: other where not, unless they have a bone lie under them, that they may be safely prest for consolidation. And therefore in a lean Body an Artery being by chance cut in the Arm may be closed up again, if it be bound up betimes and with a strait bondage as it ought, for the avoiding of an aneurysm.

Riol. Enchir. Anat. l. 5. c. 6.

VI. Before we think of opening Arteries in the head for averting of fluxions, the experiment of *Al. Benedictus* will not be unprofitable, to apply to the shaved head those Medicines that restrain the impetus or deflux of the Humours, from the Eyebrows even to the crown: if hereupon the eyes begin to be dry, it appears that the eyes are watered by those Veins that lie under the Skin; but if they continue wet, it is manifest that the Humour flows to them under or within the bone. The mixture that we speak of for suspending the Rheum is such as this, Make a cataplasin of fine flower and the dust of Frankincense with the white of an Egg, adding coprose and Stone alume.

Idem libid.

VII. Arteriotomy, that was highly esteemed of by the Ancients, some of the Moderns practise, and mightily cry up its use: But, as far as has appeared to my observation, so famed a success has often been wanting to that operation. Nor is this

a wonder, because that reason on which the Ancients relied, blaming the Arterial Blood as more outrageous than the venal (and supposing it different from it) and therefore advising the letting of it out, does not hold at all: Nor indeed is there any other reason, why Blood being let out of an Artery near the pained place, should rather give ease than if it were let out of a Vein; nay rather on the contrary we may expect greater help from the opening of a Vein, because an Artery being emptied draws nothing from the part affected; whereas a Vein being opened draws Blood from all the neighbourhood instead of that which is let out, and often reforms and returns to the circulation Blood and other Humours collected near the nest of the disease. However that we may not depart too much from the Practice of the Ancients, attributing nothing to Arteriotomy, we grant that it may perhaps sometimes help, although not immediately and causally, but only consequentially and by accident; in as much, namely, as the ends of the Artery cut in two do coalesce, so that there is no passage for the Blood any longer that way; for hence, seeing a somewhat less quantity of Blood is conveyed to the part by the Arteries, and yet an equal portion is still carried back by the veins, it therefore sometimes happens that the fuel of the morbid matter is diminished, and its minera consumed by degrees: and for this reason this administration does often happily succeed in inflammations of the eyes. Moreover a practice not unlike this is used by Farriers for the curing of malignant Tumours in Horses-legs; namely they take hold of and bind the Artery whereby the matter flows to the part affected; in the mean time that which had already flow'd in is partly evaporated and partly reformed by the Veins. I have heard also that almost the same method was tried by our *Harvey* not without success for curing stumous and Scirrhus tumours in man's Body willis.

VIII. It is better to divide the Arteries with a red hot iron, for there is danger otherwise that the Bleeding cannot be stopt. Nor must we omit to mention that in this case, viz. in the burning of an Artery, Surgeons may not use those things that forthwith remove the Eschar (as in other burnings) till the holes of the Arteries be wholly closed up: for by Butter and other things that are used for this purpose the Eschar easily falls off before the closing up of the Arteries, and the Blood inevitably issues forth: we must take heed of this therefore as of a greater evil.

Mercat. de ind. Med. cap. 4.

Arthriticks, or Medicines for the Gout.

(See Arthritis, Book I.)

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They respect either the Serum, I.

Or the Nerves, II.

Or the Pain, III.

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Whether Agrippa's Remedy, of bathing the pained Parts in sharp Vinegar, be to be imitated, VII.

When Emplasticks help, VIII.

I. Those Medicines are generally called here Arthritick, which are good both for the Gout and

and other Distempers of the Joints. Now seeing the Stone, Gout and Hypochondriacal affection are bred out of the same Egg as it were, and follow one another, it will be eade to discover the Nature of Arthriticks; for so both Nephriticks are Arthriticks, and Hypochondriacks are so also: The Hypochondres afford matter, the Kidneys coagulate it, the Joints receive it; whence the manner of their acting appears. *Arthriticks* namely respect, either 1. The *Serum*, which is to be supposed much depraved in the Gout and Distempers akin to it. Such are (1) *Universal evacuators and diverters* of it by Stool, Urine and the habit of the Body, without which we cannot successfully cure: Diaphoreticks are chiefly useful to the Arthritical, and are as it were their only helpers: (2) *Particular Alteratives*, as in respect of its quantity, such as lightly consume and dry it up, and so divert Defluxions; so China, &c. is commended; also in respect of its quality, either such as temper and dilute, (as watery and substantially moistening Medicines,) or such as invert, absorb and precipitate its saltness and acrimony. Namely all *Aperients* that respect the depuration of the *Viscera*, their *Chylification* and *Tone*, especially *Steel Remedies* and also *Antiscorbuticks* themselves, are profitable to the Arthritical; because these take away the antecedent and feeding Cause, viz. the acrimonious Salts, and procure the breeding of a Balsamick and sweet serum: Unless this be observed, it is in vain to think of curing the Arthritical, for herein does both their Preservation and Cure consist. Now these very Remedies are good both in the *Arthritis* or Joint-gout, the *Sciatica* or Hip-gout, the Feet-gout, the Hand-gout, and in catarrhal Defluxions and the like. (3) *Resolvents*, such as render the serum fluxile, the chief among which are Cinnabarines, that do greatly hinder coagulation, and both upon other occasions, and especially in this case make the serum fluxile. But these, as also *Mercurials* outwardly, are chiefly good in Pains of the Joints, and others that arise from the *Lues Venerea*, where *Emplass. de ranis* with Mercury benefiteth.

II. Or 2. the *Nerves*, whither we refer the *Membranes*, *Ligaments*, and *Fibres*, which namely suffer, are debilitated and irritated by the afflux of the offending Humours; and such are the same as are reckoned under *Cephalicks*, and so all *Cephalicks* are Arthriticks, because the Nerves have their Origine in the Head. But the Medicines that are as it were properly owing to the Joints, and come under the title of Arthriticks, are (1.) those which are endued with a Balsamick, oily, sweet and roscid Sulphur, so Germander, Ground-Pine, Rosemary, Sage and Gumms; whence belong hither *Galbanetum Paracelsi*, *Castor*, *Euphorbium*. Nor hinders it that all these are not indifferently agreeable to Arthriticks because of their heat: for if you consider the afflux of Humours and the heat arising thence, Germander and Ground-Pine are commonly only used for them in the first place especially in the fit: but whereas the Ligaments and Nerves are cold, hence in other cases the joints do also sometimes altogether require such things: And the same, besides the Gout, are good also for the Palsie, Atrophie, Wounds of the Joints and Nerves, and especially for the ferous ichor of Ulcers, which practical Experience teacheth ought not nor cannot be so well cured with Astringents, as with such as strengthen the Part, that its due nourishment may be actually communicated to it. *Contraction* also and *weakness of the Parts* from Wounds, Fractures, &c. yield to these Nervine Remedies: yea even Ulcers themselves often cannot be healed, till the tone of the Part affected be restored by such like Nervine Medicines. (2.) Those that are endued with a fixt Sulphur that is friendly to Nature; for whatsoever Symptoms arise in general from salt, acrimonious, acid Spicula, and are allayed by a sulphureous viscosity and a power of demulcing that is friendly to Nature, come into

this number, especially Cinnabarines, which do both singularly comfort and respect all the Pains of all the Nervous Parts, and chiefly the torments of the Joints, especially if they be joynd with Opiats: These therefore are good for the Arthritical, both as they respect the Serum, and as they are indued with the said Sulphur. (3.) And seeing volatil Salts are also indued with an oily Salybur, these likewise may be fitly given inwardly upon that account; and outwardly, both these and also spirituous volatils do service: hence Spirit of Hartshorn and of Sal Armoniack being duly used, comfort the Joints: Thus *Aqua magnanimitatis*, or the Spirit of Pismires is in this case advisedly used outwardly: but Earth-worms do especially belong hither, which have a sweet mucilage in their substance, interwoven with Saline volatil Parts; hence being given in substance in Potions, they demulce the Nervous Parts, and when applied outwardly they have almost always done their office; whence they are chiefly commended in the wandering Scorbutick Gout. Now these things are good in all Pains and Anxieties, but especially in the Joint-gout, Feet-gout, &c. and the Maladies that arise therefrom.

III. Or 3. they respect the *urgent Pain* it self, that arises from the tension and twitching of the Membranes: of which sort are inwardly the forementioned Emulsions, also Cinnabarines and Anodynes, all which do good Service; especially if at the same time provision be made for the fountain of the evil it self by Medicines depurating the *Viscera*, and for the acrimony of the Serum by other Remedies: Outwardly also there are allayers of the Pain, amongst which, omitting all the rest, we only name (1) *Paregoricks*; thus topicks of sweet Milk, fine Flower, Saffron, &c. are commended, and other like fomentations; (2) *Spirituos*, Sulphureous, and Urinous Nervine Remedies: for Nervines are the best of all topical Arthriticks; whence not only the recited Nervine Vegetables have place in some cases, but also chiefly Preparations of Earth-worms and Pismires, such as are the before-mentioned Spirits, the volatil Spirit of Earth-worms, *Aqua magnanimitatis*, Spirit of Hartshorn, of Sal Armoniack, the Oil of Soap, &c.

IV. But we would have it to be noted, that the tone of the Joints is to be preserved; whence too hot and dry internal Medicines, such as exhaust the Serum too much, as they are to be avoided in the Stone, so also in the Gout: There is namely a proportion of the Serum to be observed, the thinner Parts of it are not to be exhausted, while the thicker are left; that is, not the serous Parts, which are the vehicle indeed, but withal the bridle of the Bile, while the saline acrimonious are left. Hence those are much in the wrong that undertake to cure Arthritical Persons by sweating only, caused by external Impellents, as by the heat of a Bath, &c. without using internal Specifick Impellents.

V. But we must not remedy the Joints alone, without taking care of the whole; nor the *Viscera* alone, neglecting the Joints: For seeing the Joints receive and pay for the Vices of the whole, hence in vain (as the vulgar Opinion is) do we undertake the cure, unless the saline acrimony be removed, or unless the fountain be stopped, as I may say: Whence all Topicks are often in vain, nor do they any of them give constant ease. Nevertheless we must see withal, that the Joints themselves be not neglected, whether they be more hurt by external cold, or by Venery, Wine and other things.

VI. As to Topicks, we must note in general this Practical Axiom, That they often exasperate the Pain and Disease; inasmuch as they do not so much demulce the impacted matter, nor so much comfort the afflicted *Archeus*, as make the torment of the

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the Malady greater: so that although the Symptoms seem sometimes to abate, yet there ensue more torturing Pains, or other Symptoms spring from thence: Yea hence those that profit at one time, hurt at another, and so some may be used for defence and strengthening, but others better let alone.

VII. Hence Repellents, or Astringents, or aqueous alone have no place in Pains of the Joints, for they weaken the Part the more, and are inimicous to the Nerves and Joints; which is to be understood of acids themselves also. Hence that which Pliny relates, that M. Agrippa in a sharp Fit cured the intolerable pain of his Feet by putting them and his Legs into acid Vinegar, is not lightly to be imitated.

VIII. Unctuous and fat Emplasticks indeed have place in some of the recited Diseases of the Joints, as in the serous ichor of Ulcers, in pain from the Lues Venerea, &c. but are not so good in Arthritical Pains. Hence we have learned by frequent Experience that Ointments, Plasters and the like have done the Gouty more harm than good, yea that many by this means have made a fixed Gout of a running one, and some have generated *tophi* or gritty Stones in the Part. Hence also Galen himself writes truly, that *tophi* are produced in the Gout from a glutinous and thick Humour, when the same is not digested by little and little, but dried all together by violent Remedies: and Fernelius Conf. 12. observes that the Pains are doubled thereby.

Lib. 23.
cap. 1.

4. m. m. c. 3.

G. Wolf.
Wedelius de
Simpl. Med.
Fac. p. 122.

Balnea, or Baths.

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I. Baths, as they are very profitable, used aright; so they are dangerous, if used amiss. For some are to be bathed more gently, others more strongly. Those who are bathed more gently are not washed largely, and by pouring the water forcibly upon them, but more sparingly, and by touching them as it were only with the water: These indeed do nothing themselves, (not so much as talk) but those that wait upon them are to do all; they are neither rubbed, nor dried with a Scraper or Flesh-brush, but only with Sponges or Towels; and they are led the nearest way into the Bath (that they be not toiled) the entrance and exit whereof must be easie. Now those are washed thus that

are much extenuated, as the Hætick; or labour of an acute Disease, as the Peripneumonick or Pleuritick; or are sick of a Burning Fever: for none of these can take much pains. But some descend into the Baths strong, labouring of no acute Disease, but for some Morbous apparatus, or Chronical Passions: These are washed longer, for the water is poured largely and violently upon them, and they both wash and rub themselves with their own hands: whether the way to the Bath be long or short, whether the access to it or exit from it be easie or hard, no care is taken; and in the Bath they are rubbed (most strongly those who are washed for a Scab or Leprosie, or other fault of the skin) with some Wash-ball or other extensive Medicine, as Soap, or Bran, or Bean-flower: which Medicines such as are more weak ought not to use, but only the washing, and an anointing with Oil. But if together with driness of the Body, or an acute Disease, there happen some Distemper of the Skin, or there be need of some deterfion because of the nastiness of the Skin through Cere-cloths or Pulveresses that any has used before, let it be done moderately with a little Wash-ball, or rather with the lather or froth thereof that arises therefrom being stirred about in water.

Valles. Com-
ment. in lib.
de Viâ.
Acut. p. 137.

II. The Ancients were wont in Baths to use hard Scrapers made of Stone or some Metal, or of the hardest Woods to cleanse off the filth from the skin: But in those whom we are afraid to scrub hard, and who ought to be used more gently, we must dry their Bodies only by wiping them with Sponges or Linnen cloths; nor must we dry it very much with these neither, but anoint the Body before it be quite dry, viz. with common Oil, which they used in the last part of the Bath, lest their Bodies being newly rarefied by the Bath should be offended by the Air.

Idem, p. 138.

III. But though it make no matter whether or no the rest of the Body be dried exactly, the Head must be dried as much as possible and be wiped with a Sponge; because if any moisture be left in the Head, Catarrhs will be raised thereby, which in all Diseases of this nature are most dangerous. On the same account heed must be taken that the extreme Parts be not refrigerated, neither the Head, nor the rest of the Body.

Idem.

IV. According to Hippocrates (in the forecited place) we must neither use a Bath presently after eating, nor eat presently after bathing: because whether we bathe presently after eating, or eat before the motion of the Bath be ceased, the Meat will be distributed unseasonably, and will be badly concocted, the natural heat being called out toward the skin with the Blood. Nor must we abstain only from bathing the whole Body after eating, but also some particular part: for we must not presently after Meal use an irrigation of the Head or Hypochondres, in the Diseases wherein we use them, except in some rare Passions, as when we irrigate the Head for procuring Sleep; for then we wash when our Supper is not well down, namely that thereby we may cause that very thing which we are afraid of in other Sick Persons, namely fill the Head with vapours. In like manner we may give to those that are much dried, (when they are newly come out of the Bath, nay whilst they are in it) Milk, or some other moistening Liquor, that is easily changed: for because it is easily changed or concocted, it hurts not though it be hastily distributed, and being soon and plentifully distributed it wets the Body the more thoroughly, and moistens it the more.

Idem, p. 140.

V. Hippocrates in the same place shews in what Distempers Bathing profiteth: It is more agreeable in Peripneumonies than in burning Fevers; for it abates the Pain of the Side, Breast and Back: it matures and brings forth the spittle, and makes respiration easie, and wears off lassitude; it also supplies the Joints and the Skin, and provokes Urine, and

cures

cures the heaviness of the Head, and moistens the Nostrils: So that Baths are good for all those that have need of them; but if in their preparation any one thing, or more, be wanting, there is danger, they may do more harm than good: for every thing that is not duly prepared and ordered by the Attendants does great harm. He says they are more agreeable in the Peripneumony than in burning Fevers, because seeing they are hot and moist, they mature and bring forth the spittle, and so take away the pain of the side, &c. all which things are greatly necessary for Peripneumonies: But why does he mention a pain in the Side as accompanying a Peripneumony? I suppose he means by Peripneumonies herenot only an Inflammation of the Lungs, but all Inflammations within the thorax, because of the common accident of difficult respiration, and therefore uses a word of multitude, saying, [in Peripneumonies.] But you will say, if those may not use a Bath in whom there is a fulness of Humours, a great Cacochymie, or a great apparatus for Fluxions, or an internal Inflammation, how can it be proper for a Peripneumony, which is accompanied indeed by all these? It must not indeed be used before the fluxion be ceased, and the greatest part of the store be evacuated by Bleeding and perhaps also by Purging, and the tumour begin to fall; for then the danger of Fluxion is over, and there is present a necessity of concoction and coughing up. When therefore Galen denies the use of a Bath when there is an Inflammation in any inward Part, it is fit we should understand him, before the declination of the Inflammation: Now I here call that the declension of the Inflammation, which is the declension of the tumour it self: and with this interpretation bathing is more profitable for the Peripneumonick than for those that are sick of a burning Fever.

Not but that it may be profitable for these too, if it be undertaken seasonably, as when the greatest part of the Excrements is evacuated, and the Humours are ready for concoction; but only it is more beneficial to the Peripneumonick: For in them it concocts the remainders of the Humours in the Veins, tempers the heat, and will promote any evacuations that are; in these also it both matures the spittle, and brings it forth, and makes respiration ease, and asswageth the Pains of the Breast, Back and Side.

Bathing also wears off Lassitudes, for it supple the Joints, and loosens the Skin: wherefore whether a man be troubled with spontaneous or non-spontaneous lassitudes, he can use nothing better than a Bath, unless there be either such a fulness or badness of Humours, that it is fitting to Bleed or Purge first: As if a man come wearied from a long Journey, if he perceive a Plethora, he will do well to let Blood first and Bathe afterwards; or if he have also collected some considerable quantity of Choler, before he go into the Bath let him take somewhat that may work gently by Stool, as *Cassia fistularis*, and after its operation let him bathe. But if he have neither of these, he will be refreshed by bathing only. But if he perceive neither so great a Plethora or Cacochymie, as may force him to use those evacuations, nor yet so little as that he dare enter into the Bath, in this hesitation let it suffice to abstain from both, and to seek Remedy only by an attenuating diet and rest. Likewise he that is troubled with a spontaneous lassitude, and from thence fears a Disease, unless he perceive a Plethora or great Cacochymie, and be otherwise used to bathing, he may preserve himself by bathing: otherwise he ought to use manifest evacuations for prevention. Yet if a Person either spontaneously or non-spontaneously wearied, enter a Bath, labouring either of a Plethora or great Cacochymie, he will procure to himself such Diseases as he would not perhaps have otherwise fallen into: if he be Plethorick, he may fall into Fluxions, and so perhaps into dangerous Inflammations; if Ca-

choymical, into rigors and putrid Fevers. Whence it is that in a Phlegmonous lassitude we must never enter into a Bath without opening a Vein first; in a tensile one, sometimes we may; but in an ulcerous, generally; but then the Persons must be such as abound not much with either of the aforesaid things, and have been also accustomed to bathing.

Hippocrates says moreover, [and it provokes Urine]; which words may be taken either separately, or as if they contained a cause of what was said before: for a Bath may provoke Urine, and doing so, does wear off lassitude: for as it is said *Aphor. 74. Sect. 4. Much and thick Urine is wont to be made in Fevers which are accompanied with lassitudes, and freeth the Patient from an abscess upon the Joints:* By the same way it will cure lassitudes, and make much toward the suppling of the Joints. But a Bath provokes Urine as it loosens the ways and melts the Humours, and so causes whatsoever stops, to pass out.

It cures also the heaviness of the Head, and moistens the Nostrils: But it is manifest that the moistening of the Nostrils is only needful in those that are very dry; whose Head if it ake, 'tis probable it will be cured by moistening the Nostrils, for thereby the Cause of the Disease will be evacuated. Now the Nostrils that were dry are moistened, when that is concocted which was crude, and that is melted which was concrete; when that which was dry is moistened, and that which was bound is loosened; but a Bath is fit to do all these. As therefore it cures the pain of the Breast by bringing out the Spittle, so it takes away the pain of the Head by moistening the Nostrils. All these good things does a Bath perform, but it is a dangerous Remedy if any of those things be wanting that fit a man for it.

VI. Hippocrates does in the same place number up those whom the use of a Bath offends: It is unreasonable for those to bathe, whose Belly is moister than is convenient, and was not loosened before, as also for them whose Faculties languish, or who are troubled with a Nausea, or Belch somewhat bilious; or for those who Bleed at the Nose, unless they Bleed less than they should do (for you know the Seasons) for if they Bleed less, it is good to bathe either the whole Body, or the Head only, for this will help more than other things. Galen understands the reason, why it is unreasonable for those to bathe whose Belly is moister than is convenient, to be because the Excrements will be snatched into the habit of the Body, and the Stools stopped: But I think this is not the only reason (for on this account it would often behove those to bathe that have a *Diarrhoea*, namely to stop it) but because there is more of vicious Humours than can be revelled by the Bath toward the Skin, the Belly will be rather loosed by the melting of the Humours, and by loosening and moistening of the Intestines and the Vessels that belong to them: But if there remain so little of Excrements that it may be drawn aside by the Bath, it is better to let alone the *Diarrhoea* that is ready to cease of it self, than to vitiate the whole Body for a thing that is not at all necessary.

But neither does he grant a Bath to those who are too Costive: and adding, [and was not loosened before] he shews the Cause; namely some are costive after a great looseness, as men are generally after Purging Physick, in which case bathing is not prejudicial: but if the Belly be bound, and no evacuation went before, it then contains a great deal of Excrement and Filth (and we said before that we must not bathe when the Belly is full of Meat, how much less when it is full of Excrements?) and in such case therefore one must not bathe unless his Belly be first loosened: namely, if upon any account we be compelled to bring such to the Bath, we must first draw down the Excrements with

a Clyster, as we are wont to do for letting of Blood.

Nor must those bathe whose Faculties languish, namely this Remedy is a pretty strong evacuator, and therefore it requires strength to bear it. Now that the evacuation is great that is caused by a Bath, is shewn in the next Paragraph. Yet we will not on this account keep the *Hætick* from Baths, but according to their strength we will bathe them more or less, gentlier or stronger, and some indeed not at all.

Neither those who are troubled with a *Nausea*, or belch somewhat that is bilious, these namely are the signs of a great *Cacochymie*, which we have shewed to be a sufficient hindrance of bathing.

Nor those who Bleed at the Nose, unless they bleed less than they should do; for if they bleed less, it is good to bathe, whether the whole Body receive benefit from the flux of Blood more than by any other Remedy, as in those that labour under a Plethora of the whole Body; or the Head only be profited, as in those who have only a Plethora thereof. The cause whereof doubtless is, that a Bath promotes the flowing of the Blood, liquating of it and loosening the mouths of the Veins. But it is clear that this is meant of a Bath of hot or tepid water; for immersion into cold water stops fluxes of Blood, which Women have learned by daily Experience, who therefore when their Terms flow, shun cold water. We know also that by pouring on of cold water, or by dipping any Parts of the Body into it, bleeding at the Nose uses to be stopt; and so from whencesoever the Blood issue, the using of cold water profiteth, unless it flow out of some internal Part, and especially if out of the Lungs, for then the Blood fleeing back toward the Heart, it may chance to abound more about the Lungs: But an hot Bath increases all evacuations of Blood, and therefore it is to be avoided, unless when an evacuation is seasonable, and the Blood proceeds not accordingly as is requisite.

VII. There is no reason why a Physician should slight that evacuation that is caused by a Bath, as small and not worth mentioning; for from one long-continued lotion (in the water of a Bath) that was made with violent pourings on of the water, I have seen more filth, and tough and thick Phlegm (such as might not be seen only, but also drawn in length by the fingers or a piece of a stick) drawn out this way, than is used to be by the most plentiful Blood-letting, not unlike to that which is wont to appear in the basin upon bleeding in the Foot.

VIII. Whether must we not forbear bathing till the Disease be wholly cured? I answer by distinction: If the Patient perceive the Bath to agree with his Strength and Nature, and that the Disease lessens daily, let him continue the use thereof till it wholly cease: If he be little or nothing benefited, let him take his leave of the Bath, because his Distemper is greater than can be overcome by it. But note, that although the benefit be not manifest, if so be the Patient be not weakened, he must not presently desist; because, as Experience testifies, many that have perceived no benefit all the time they bathed, have some Weeks or Months after their return home been either wholly cured, or at least much helped; because Nature, the strength being recruited by a good and orderly diet, is wont to obliterate all the footsteps of the Disease, says *Aræteus*.

IX. Those err who make the term of staying in the Bath to be, till the Fingers and Toes become wrinkled; for all have not the same habit of Body, in some it is rare and lax, in others hard and dense: the Humors that are dispersed through the Flesh are few and thin in some, in

others many and thick, and perhaps such would sooner faint away, than their Fingers and Toes wrinkle. Others expect sweat upon the Forehead; but the same causes will make it to break forth more easily, or more difficultly in several Persons. They who define a certain space of time, are deceived, for respect is not to be had so much to the hours as circumstances; and the endurance of the strength is the just bound: for old Women, the cold and moist, the robust, those that have a dense and compact habit of Body, the fat, those that are accustomed to bathing, do endure it longer, especially in the Spring and Autumn, than Young men, boyes, old men, the hot, dry, rare, weak, lean, or People unaccustomed to Baths: For the former are less dissolved, and are not so subject to fainting, as the latter: To which add, that some Baths are more generous and effectual than others, and such require a less stay in them; and that some Diseases are more rebellious and fixed than others, and such require a longer bathing. From all which it is clear, that no certain number of hours can be prescribed for bathing in so great variety of circumstances.

X. I have observed that washing or abiding in sweet and hot water is not without danger: A man of Seventy years old, lusty for his Age, coming out of the Countrey towards Evening, and finding himself somewhat weary, commanded a Bath of common water to be presently got ready: Wherein having hardly stayed an hour, and perceiving a fainting Fit a coming, he betook himself to bed, in which being presently taken with an Apoplexy, he died that very Night. Another having heated himself in such a Bath, a Swooning and a great and long Disease followed, with a very great weakness. Hence it appears how full of danger washing in water is, whether it be Simple, or Medicinal by Nature or Art, unless the Body be first prepared: for by bathing, especially in common water, the Body is made slippery, the Pores and all the ways are widened, the Viscera are heated, the Blood boils in the *Vena cava*, and hence the Humours are diffused this way and that way, &c.

XI. *Helmont* reckons the frequent use of *Thermæ* or hot Baths amongst the impediments of life: It is certain indeed that by their use the antecedent cause, as fluxions or Humours turgid with wild or preternatural Salts, is removed, whence they have profited some gouty persons, whose members were swelled by the preceding distemper, and they have found ease for a time; but what becomes in the mean time of the *minera* or fountain of the Disease? this being left untouched, especially in Diseases that consist of their ferments, how should it not be made more fierce, and tyrannize more over the Body? Not to mention that being sometimes administered to the hypochondriacal, by operating more vehemently on the ferments of the viscera they destroy them without our observing it, and change the whole mass of Blood and the nervous juice by their violent action, and exalt the heat of the Bowels, which is the cause that occasion is given for new ebullitions afterwards, and a source of new fluxions springs up, the members become slippery and relaxed, the Body being softened by them; and lurking fluxions, especially in less prepared Bodies, being dissolved thereby, from a little fire there has arisen a great flame, the malady growing worse. Whence *Omicrius* in *Epist. 7. l. 5. Timæ*, speaks very much against their use, saying, That he had so ill success from the use of *Thermæ* or hot Baths in the Gout, that contracting an *Hætick* heat thereby he was almost become *tabid*, yea and that his fits were more frequent and cruel than they used to be ever before: I have known none, proceeds he, that was freed from fits of the Gout by the use of them: but that every one found the fits rather stronger and

Fabr. Hild.
Cent. 6.
Obs. 96.

and frequenter as soon as they enter'd into such Baths. Hence some attribute to some *Thermæ* a certain arsenical poison that is an enemy to the vital powers: *F. O. Grenib. l. 3. c. of the shortness of Man's Life § 77. p. 472.* Perhaps through the arsenical poison of the Sulphur, whose halitus affect some mens nostrils. Although besides this deleterial quality they want not others also, which are like those occult ones that are drawn from the class of Minerals, seeing it is clear by experience that they have in process of time produced in the indisposed (besides erosions of the viscera) cachexies, atrophies, in some swoonings and other admirable Symptoms. So that some are of opinion, that the same thing happens to some *Thermæ*, especially taken inwardly, which * *Th. Erastus, T. Zwingerus* (in his preface that he prefixed before *Santis Ardyni's* book of poisons) and *Oporinus* (in his Epistle concerning *Paracelsus's* Medicines and their deleterial vertues) have left written, viz. That many who for a time have found help from these Remedies, have died in a short while after: The examples are odious; but I leave these things to be further examined by others. See *Moser* of the abuse of *Thermæ* and *Acidulæ*; and the history of the Life and Death of *Bacon Lord Verulam*.

XII. Dry Baths in an heated air, seeing they too much inflame the Body, and drive Humours violently toward its surface, are not so approved of as moist. Yet if such Bath be made of the steam or smook that arises from the decoction of a moist Bath, we may a little heat our Body thereby, and so dispose it for its entrance into the moist bath, that this latter may operate the better.

XIII. Note that Baths are not so convenient when Epidemical distempers rage, especially, the plague, for by opening the pores they make the entrance for the contagion the easier.

XIV. Baths are not good when the Serum is much increased or moved, whether in a state that is partly according to Nature, or in a preternatural; whether as to the whole Body, or to some certain parts: hence they are wont not to succeed so well in the cacochemical and plethorick, whence they do hurt in the cachexie, Dropsie, as also in the cough, coryza, catarrhs upon the breast: yea there have been some who being troubled with a coryza (or defluxion of rheum into the Nose or Ears) have upon their entrance into a Bath lost their smell or hearing. Nor are they good in Inflammations of the parts, as in an erysipelas. Nor is *Helmont's* opinion to the contrary to be regarded, who says, that such Baths are often good in distillations; because they are not profitable even to the Gouty themselves: for we have observed that the parts being thereby swelled, have occasioned the greater afflux of Humours.

XV. It is clear by experience that hot and Sulphureous Baths do very much exalt the Saline and other morbid particles in Mans Body, that dwell within the viscera or are contained in the Humours, and bring them suddenly to the highest pitch, namely by exagitating of them they make them more unruly, and drive them forward out of the first ways into the Blood and from thence into the Brain and genus nervosum, and moreover join together those that were severed and quiet before, and excite them into a certain effervescency. Wherefore those that are subject to either an hereditary Gout or Stone, and as yet have had no fits of those distempers, do often perceive that by the use of Baths the fruits of both these Diseases are presently ripen'd in them.

XVI. Sulphureous *Thermæ* or hot Baths contain four things, 1. Water, 2. An oiliness, 3. An acid Spirit, 4. A little lixivial Salt: For Chymists know that all Sulphur does chiefly consist of an oil and an acid Spirit; and it is manifest 1. from its ready bur-

ning, whereby it is clear that oil abounds in it, for only fat and oily things are the fuel of fire; 2. From its long continued burning, which depends upon an acid Spirit; 3. From the oil that may be drawn from it per campanam, which testifieth its acid Spirit. Seeing therefore Sulphur consists of an acid Spirit and oil, it is manifest that Sulphureous Baths abound with the same. Now these are generated of a Water endued with a very acrimonious lixivial Salt concurring with the minera of Sulphur, by which Salt and the acid Spirit of Sulphur there is raised an effervescence and with the effervescence an heat, and so the Water also and the Oil do join after a sort into one. These Baths have a notable penetrating vertue, wherefore they reach to the inmost parts of the Body that are affected: Now that which penetrates so, is the acid Spirit that is intimately mixt with the lixivial Salt and temper'd with the oil, by the vertue of which oil it tempers also the acrimonious Humour that sticks to the Membranes and twitches them, and gives occasion for convulsions, &c. I say it both tempers it by its oily substance, and also corrects the same by an exact mixture of the lixivious Salt and acid Spirit, whereby the acidity is overcome that is always hurtful, and is the primary cause of gnawing in convulsions, &c. For the subtil lixivious Salt of the Baths being in a manner volatiliz'd, is the best and perhaps the only thing for coagulating the more subtil acid Spirit. Therefore it will be the office of Art to imitate nature, and to render the lixivious Salt volatil and fit for coagulating the subtil acid Spirits, and withal for curing the distempers arising thence.

XVII. We must abstain from hot Baths whilst obstructions are present in the hypochondres, the mela-raick Veins stuffed with tartareous juices, and the mass of Blood impregnated with Salts that are as yet with wild, acrimonious and acid; for by the Bath these might be melted and fused, and being so, might be carried into other parts and more principal viscera, and there raise other more grievous Symptoms.

Caputpurgia, or Purgers of the Head, Errhines or drawers out of Phlegm by the Nose, and Ptarmicks or Sneezing Medicines.

(See Capitis affectus in genere, or Diseases of the Head in general, Book 3.)

The Contents:

- The Nose is the Emunctory of the Head. I.
- Ptarmicks and Errhines operate by irritating the Membrane of the Nostrils. II.
- How Ptarmicks and Errhines differ. III.
- Errhines respect especially the private or peculiar fault of the Nostrils. IV.
- Ptarmicks relieve the Head. V.
- When they are chiefly to be used. VI.
- What Distempers they are bad for. VII.
- They are owing to the Humours. VIII.
- When Errhines are to be used, and when Apoplegmatifms. IX.
- White Vitriol is an effectual Errhine. X.

I. WE take it for granted that the Nose is the Emunctory and van as it were of the Brain: for whatsoever some have imagin'd to the contrary concerning the publick use of this Sierce which is destin'd for the service of the whole machine, yet by the opinions of the Ancients and the experiments

Disp. con-
tr. Paracels.
p. 3. p. 211.

Fred. Hoffm.
Meth. Med.
lib. 2. c. 6.

Wedel. de
c. m. ext. p.
98.

In Catarrh.
delirium. p.
360.

Wedel. de c.
m. ext. p.
101.

Willis de
morb. Con-
vuls. cap. 9.

Fr. Sylvius
Pr. l. 2. c.
23. § 236.

Fred. Hoffm.
m. m. lib. 1.
c. 11.

experiments of the more sagacious Moderns, it is certain that the fountain indeed of Catarrhs is not to be sought for in the Brain, but in the inseparable companion of the Blood, the *Serum*, (for of Blood and *Serum*, as of hot and moist, do the elements of life consist;) or in the abundance of the *Lympha* separated by the glands, into which the Lymphatick Vessels either end or arise therefrom: But to affirm that the Brain is altogether free, privileged and exempt in Catarrhs, is to deny that it is water'd with *Serum*, which is absurd, or that it is not affected in a *coryza* or other Catarrhs, which is against experience.

Wedel. de
f. m. fac. p.
228. See
Willis. cer.
Anat. c. 12.

II. The reason of the activity and operation of Ptarmicks and Errhines consists in the sollicitation, irritation and twitching of the sensible Membrane of the Nostrils by an external cause: hence whatsoever things do more nearly affect and as it were tickle this Membrane, the same do move excretion either simply, or with sneezing. Thus not only a feather put up the Nose causes sneezing, as also even the unequal *afflatus* of the ambient air, the Sun-beams, &c. but also especially all those things that are communicated to the Nostrils, which are endued with a saline quality and acrimony, whether fixed, as white vitriol, or volatil: So all acrimonious things and all Purgers are Ptarmicks.

Idem.

III. The more the saline goads are left to themselves, the more they stimulate; the less they are left to themselves or the more obtuse they are, the less they stimulate. The former are called *Ptarmicks*, that is, which stimulate with sneezing; the latter *Errhines*, that melt the Humours without sneezing. Hence that the saline *spicula* may approach the Membrane of the Nostrils the more intimately, Ptarmicks are given in powder or in a dry form, for so they operate more, and the more finely they are powder'd, the more strongly; so that they differ not but in degrees. The saline *spicula* touching the Membrane of the Nostrils on this manner, three things follow, 1. The irritation it self; 2. The fusion and liquation of the Humours; 3. The excretion it self.

Idem.

IV. Errhines are more used for the private service of the Nostrils, Ptarmicks more for that of other Parts. Errhines are most useful and profitable in a *Coryza*, *Ozena*, *Polypus*, for cleansing, dissipating and procuring a free passage for the Humours.

V. Sneezing Medicines ease the Head both in general, and also in special, when the Body is evacuated and the antecedent fœvel taken away; for they are not good when the matter is too plentiful and stagnating: Whence in a *Coryza* and Catarrhs they take place rather in the declination and state, than in the beginning, when all things are crude.

Idem.

VI. They are chiefly of use when the faculty is asleep as it were in the Watch-Tower of the Body. Hence if they operate not when they are exhibited, they often signify the faculty to be even dead; which I have often seen, in Child-bed Women and others, in as much as Nature is no longer sensible of the goad, nor actuates; which holds good also in others, as for instance, in Purgers.

Idem.

VII. When those parts are indisposed that necessarily concur to sneezing, Sternutatories are not proper: whence they do harm in venereal pains of the head, in fractures, in luxations of the Ribs, Ulcers of the Lungs, Spitting of Blood, Ruptures, &c.

Idem.

VIII. Ptarmicks are owing to the Humours, for the bringing out the *Serum* that stagnates about the coats of the Brain, and withal discuss whatsoever sticks there: Hence they are rather to be used in distempers arising from a positive cause, than from a privative: and hence also they are not so convenient in too much driness, and for the Cholerick and Melancholick, but more for the Phleg-

matick in whom the *Serum* is more plentiful, the coagulation whereof it is the chief property of these kind of Medicines to hinder.

IX. Few know when Phlegm is to be drawn from the Brain by Errhines, and when by Apophlegmatisms, or when by both. By Errhines, and so through the *os cribroforme*, is to be drained away that shivel that is collected in the space betwixt the right and left part of the Brain, and is sent into that space from the *Cortex* of the Brain: By Apophlegmatisms, and so through the *os Sphe-noides*, that must be drawn out which is collected in the Ventricles that are made for this purpose, and is driven thither from the *Medulla* of the Brain.

Hofman. in
Instit. ex
Riolano.

X. I have found that white vitriol dissolved in simple or some cephalick Water, and applied gently with a feather to the nostrils does in a due quantity liquefy Catarrhs according to ones wish and draw them forth, so that I have sometimes happily used it even to Infants new born that were hardly able to suck and were ready to be suffocated through obstructions of their Nostrils, as it often happens: In which case, when neither oil of sweet Almonds dropt into the Nose, nor Majoran Water infused thereinto had any success, this Medicine accomplished my desire.

G. Wolf.
Wedel. Mifc.
cur. ann. 3.
observ. 14.

Cardiacks, or Cordials.

(See *Alexipharmacks* before.)

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The abuse of Volatils. III. IV.

The abuse of Moschates. VI.

I. **S**Being those are Cordials that succour the labouring Heart, we will premise, 1. That the Heart and Blood are fellow causes, and are not to be severed, as some do. 2. That the Blood consists of two parts, a *calidum* or Blood, so called by way of excellency, and an *humidum* or *serum*; in which two alimentary Humours our Life and Health consists: nor is there any other innate heat or radical moisture besides these indued with their vigour and vital ferment. 3. We shall call those Cordials, that dispense the Blood and heat (whereof the Heart is the fountain) and do dispose the consistence of the *Serum*, and the motion and vigour of both. They are therefore such as either 1. rarify the Blood, when it seems to fail in its *εκκλυσ-τις*, or brightness, and is weak, when its Sulphureous and volatil, Mercurial and Spirituous particles are either obtuse or not vigorated in a sufficient degree; such as these are good in languishings of the Heart, lassitude with malignity, old age, Paleness, Cold, Cachexie, Ague-fits, weakness, anxieties, when the motion of the Heart fails as it were, as it does often in malignant Fevers when there is a recourse of the malignity to the Heart, or in driving out the Small Pox or Measles, &c. Of this sort are (1) *Sulphureous volatils*, and those either *Spirituous*, as the Spirit of Roses, the apoplectic water of Roses, Brandy, &c. or *oleous*, indued with a volatil oleous roscid Sulphur, which use to be called in one word *Balsamicks*, as *Lignum Aloes*, Camphor, Myrrhe, all Odoriferous things, which have an immediate commerce with the Spirits, Spices, Cinnamon, Cardamom, oil of Cinamon, Mosch, Amber, also Treacle, Mithridate. (2) *Saline Li-*

quids

als, as Salt of Worm-wood, of *Scordium*, of *Carduus Bened.* &c. which together with a precipitating vertue do notably also rarefie the Blood and reduce it into order, whence they are excellent febrifuges and sudorificks. (3) *Urinous Saline Volatils*, which are almost the most powerful of all, as the Spirit of Harts-horn, of Sal Armoniack, of Soot, of Vipers, of Hart's or Mans Blood; these also being mixt with oleous, and so being made oleous volatil Salts, have the same vertue. Hither belong also *fetid Medicines*, whether Sulphureous chiefly, or also Urinous, which are good in Fainting and Hysterical Fits and the like. Observe, that the rarefaction of the Blood denotes two things, 1. the restauration of the failing Spirits, which is chiefly done by Balsamicks and Sulphureous; 2. the vigorating of the motion and fluxility of the Serum chiefly, which is especially done by Salines.

Or 2. Such as hinder rarefaction, which (as the above said restore the Sulphureous, Balsamick and Mercurial volatil Particles in the Heart and Blood, so these) depress, blunt and precipitate them when they are too fierce and high: and they are either (1) *Aqueous*, diluting and restoring the Serum, the defect whereof renders (amongst other things) the rarefaction greater, as temperate Cordial waters, the water of Endive, Sorrel, *aq. Herc. Saxon. frigida*, Whey, &c. which being dispersed through the Blood do somewhat enervate the volatil Parts: Whereby it is clear, that Juleps, and Small beer also it self ought to be granted in a larger quantity in Fevers, and the Patients are not to be so strictly compelled to thirst. Or (2.) *Acids*, which are of the chiefest rank among these, whence it may be for a rule, *An acid tames or dulceth Sulphur*, as the juice of Citron, and Pomegranate, acid mineral Spirits, the Tinctures of Violets, Roses, &c. Or (3) *Nitrous*, which in like manner infringe and debilitate Sulphur, promote its exaltation and notably attempt it, and vigorate the Serum restoring it to it self, as *Lapis Prunellæ*, *nitrum antimon. perlatum*, &c. Or (4) *Earthy*, absorbing and precipitating, as Corals, Perles, pretious Stones, Bezoar, &c. And these maintain their place in all kinds of Fevers, and are excellently good for other bilious ebullitions (for Choler doth most of all rarefie the Blood) as in Distempers proceeding from anger, in Madness, *deliriums*, Phrenies, burning Fevers, &c.

Or they respect the consistence of the Blood, and are 3. such as hinder its resolution and preserve its consistence that is ready to be violated; whether by concentrating the Sulphur, as *acids*, whence these are most especially convenient outwardly in hindring the resolutions of the Spirits, and are good in Swoonings, colliquative sweats and when the Blood is turning to Ichor, with Mador, &c. such as are those already mention'd, but especially simple Vinegar and Vinegar of Rue, &c. also things actually cold outwardly, cold water, the water of Roses: Or by attempting the Serum, as watery Medicines, especially *Emulsions*, which have somewhat Mucilaginous in them, whence they are of very great use in Malignant Fevers, especially where watching and *delirium* are urgent: Or by strengthening as it were the band of each, (the Serum and Blood) by gently concentrating and collecting of them, as *Mucilaginous* and *earthy Astringents*, also temperate Balsamicks, as for example Harts-horn prepared Philosophically, Ivory prepared without Fire, Gelly of Harts-horn, Bole-Armene, Sealed earth, balauftins; and amongst hot things Cinnamon, *vitriolum Martis*, which enjoy also an earthy quality. Hither belong also *Opiats* themselves; for it is found by the experience of Practitioners, that *Laudanum Opiatum* is very conveniently given in the resolution of the vital Spirits and Blood, but only in a small quantity, that by this means the further dissolution of the Spirits may be hindred. We have seen wonderful effects thereof in the Fainting, Hysterical and

others. These may be mixed either with *Spirituosus analepticks*, as *consilio Alkermes*, that by this means both the dissolution may be hindred, and matter supplied to the Spirits; or with *earthy absorbents* and *resolvents*, that on this manner also the consistence of the Blood may be respected.

Or 4. They are *resolvents*, that hinder, dissolve and dissipate the clodding and as it were curdling of the Blood, whereby it is stopt as it were in its motion; they hinder the incoction of the Serum, and so by removing also some impediments, medietely help its rarefaction: and they are both the Balsamicks already spoken of, and also some *resisters of putrefaction*, as likewise watry *diluters*, but especially *terrene Medicines*, which otherwise are profitable in falls from on high, Pleurisie, &c. viz. Corals, Crabs Eyes, *antimonium diaphoreticum*, &c. *Acids* also, for these are of a middle nature as it were, both coagulating the dissolved Blood, and dissolving the coagulated: For in both cases the Blood does clod as it were, both by too much resolution, and by too much coagulation. Hence we must note that *acids* being joyned with Bezoardicks, do by their penetrating vertue, strengthen the Bezoardick and Sudorifick vertue, as for instance, the *mistura simplex*, where neither the theriacal Spirit nor the Spirit of Tartar do so much move sweat, much less the Spirit of Vitriol, yet these being joyned together promote it notably. Hither may be referred what was said of the first class of rarefiers. And these are good also in palpitation of the Heart, Fainting away, Malignant Fevers, &c. And such Medicines as perform these things eminently, namely that defend and preserve the consistence of the Spirits and Blood, that it may neither decline to a state of fusion, resolution and ichorecence, nor of coagulation, I say such as these are properly, and are called, *Bezoardicks*. All diaphoreticks also do the same thing, and especially Alexipharmacks. Nor hinders it that these, and especially the temperate are not carried immediately to the Heart; it is enough that they vibrate their operations presently out of the Stomach into the Blood, whose crasis is hereby changed, and whose energie and affection results to the Heart; yea such Cordials do often respect and take away at least the antecedent cause; however their operation obtains their end in the Heart.

II. Where there is great debility of the faculties we must not presently flee to comforting Cordials, nor indeed to them alone, but the causes are to be removed, whether there be a *Plethora* suffocating the Spirits, or a *Cachochymie* defiling them; whence often either Bleeding or Purging will do the business. The vulgar are here mistaken.

III. Let all *Volatils* consist within the bounds of Mediocrity, both in Diet and Pharmacy, and that both in the Sulphureous and Urinous. So those that in their youth drink too much Wine or Brandy, do in their following age hereby lose the strength of their Stomach, inasmuch as their decreasing heat does hence require some stronger heater: so also Medicines with Camphor, and distilled oyls do often hurt.

IV. Hence we must never so rarefie as not to mind at the same time the consistence of the Blood, that it may be brought to a natural state: Nor must we so use *Resolvers*, as not to observe the tone and due rarefaction of the Blood. Whence those offend, who (for instance) in Malignant Fevers exhaust their Patients only with volatils and perpetual sweats, when they ought to discuss indeed and preserve the rarefaction, but to temper it when it is too much. So those who use *Resolvents* more unwarily, easily make the *compages* of the Blood too lax, so that the Spirits perish as it were and dissipate; which must be noted in particular of *Cinabarines*, for they do most of all resolve the Blood: But do nothing too much, and in all cases, having premised

G. W. We.
del. de f. m.
fac. p. 93.

Idem, p. 94.

Idem.

premised universals, tonicks are to be interposed and moderate astringents.

V. Comforting Cordials are to be rightly distinguished; whence where *Serum* (for instance) is wanting, scarce any thing will do so much good as actually moist and watery things, without omitting acid or nitrous Medicines; and on the contrary, let us not give one thing for another, nor confound the same.

VI. We must not rely too much on moschated Medicines, which do greatly rarefie the Blood; for while they too much exalt and heighten the Mercurial particles, instead of comforting they easily hurt Nature, and commonly they do more good outwardly than inwardly, or at least unless when seasonably given: they have their use, but then they must be used rightly.

Idem.

Carminatives, or discussers of wind.

The Contents.

The way how to know to discuss wind or to hinder its generation, depends on the knowledge of its production. I. X.

The preservative and curatory Indications. II.

Many while they endeavour to dissipate flatus, produce them.

III. VIII.

Opiats discuss them. IV.

Carminatives are either habituous and rarefying; V.

Or absorbing and tempering: VI.

Or they help the heat and ferment of the Stomach. VII.

The hot and thinest are not always to be used. VIII.

They are not good in drines of the Intestines, and where the excrements are hard. IX.

They are to be varied according to the variety of causes. X.

I. **W**heresoever flatus are, those things contribute to their excretion that take away the impediments through which they inhere the more firmly in the parts, viz. the clamminess and glutinousness of the Phlegm from which they are produced, and such as are Aromatick, and abound with an Aromatick oil. Now I think that flatus are truly discuss'd, inasmuch as their very tenacious matter is incised and broken, whence the pituitous matter that was distracted and distended into flatus subsides, and falls into a little globule of Phlegm. For it seems to be done in the same manner, as when Boys are wont to raise bubbles through a straw-Pipe from soap dissolv'd in water: The bile being joined to the glutinous Phlegm, by rarefying of it distracts it into flatus, which by further rarefaction at length are broken of their own accord, and so by and by the Phlegm that was before distracted and rarefied coheres, and returns to its former Nature and consistence; the action of the Bile ceasing then through want of matter to act so upon, unless it can insinuate it self into some other piece of Phlegm, which it may distract into flatus and rarefie in like manner.

*Syl. de le
Boe Meth.
Med. lib. 2.
c. 21.*

II. The production and mischief of flatus is to be corrected, 1. by gently cutting the more glutinous flegm; 2. by discussing and dissipating, or otherwise suffocating these flatus; 3. by correcting the acrimony of the bile that is the Efficient cause of the flatus: And the Phlegm, after it is loosed by the bile and turned into flatus, must be gently incassated again, but not be made very glutinous. The Phlegm may be incised by volatil Salts, and all Aromaticks, and most Acids; but these are chiefly good, where there is fear to encrease and heighten both effervescencies, both in the heart and in the small Gut; in which case 'tis advisea-

ble to abstain from volatil Salts, as also from Aromaticks, both lest the store of flatus be increased, and also lest the bile be made either more acrimonious or more volatil. Among those Acids the chief place is to be given to the Spirit of Nitre as well pure as sweet, seeing it not only cuts glutinous Phlegm, but also discusses and breaks the flatus, yea and also tempers the acrimony of the bile, and fixes it when it is too volatil. This Spirit of Nitre may fitly be taken in ones usual drink, or any other Medicinal one, and that indeed in an indifferent quantity, whereby neither a nausea may be caused, nor its operation be either too strong or too weak.

III. As to the discussion of the Flatus themselves already raised and in being, I know nothing comparable to the said spirit of Nitre whether pure and simple, or made sweet, seeing most of the Medicines vulgarly known are Aromatick, and in that respect heighten and increase (after a sort at least) the acrimony of the Bile; whether I refer Volatil Salts themselves of what kind soever, all which give place to Nitre. Hence our Physicians are so solicitous about prescribing Medicines for discussing of wind, being often taught by sad experience, that such as have been given have not a little hurt their Patients, through the Bile's being made more acrimonious, & the heat increased in the body by them. The reason of which effect all such are ignorant of, as know not both the nature and reason of each effervescence, the hot and the cold: which things being understood, the reason of the burning caused by the use of Carminatives is easily perceived; and, which is the chief thing, the way is also perceived how this evil may be prevented.

*Idem
Append.
Tract. x.
Sect. 608.*

IV. Opiats hinder the generation of Flatus better than most other Medicines, such as Treacle, Mithridate, Philonium Romanum, Regiæ Nicolai, &c.

*Idem
Tract. 9.
Sect. 254.*

V. In this respect they are good with diaphoreticks, that they discuss and resolve, whence there are many diaphoreticks that are also carminatives, as the carline-thistle, zedoary, antimonium diaphoreticum, &c. which are so much the more excellent, that they both resolve, and also expell by sweat and perspiration: And they are either (1) *habituous rarefiers*, which by their thinness and their subtle and volatil vertue of attenuating heat, and correct the Phlegm whether insipid, or especially Acid, such as are both chiefly volatil oleous things, or Medicines endued with a Subtil Balsamick Sulphur married with a volatil Salt, which both restore the debilitated heat, (for an heat comparatively weak is the Father of flatus, and the Mother is a watry, or Acid, cold and viscid Humour, or Phlegm agitated into vapours) penetrate every where by their habituous vertue, and by this their subtil and volatil vaporosity help the explosion of the thicker vapours that are generated; as for instance, the four carminative Seeds, all Aromaticks, especially the roots of zedoary, galangal, and their distilled oils. And also volatil Acids, as the Spirit of Salt, simple and sweet, which we have sometimes observed to have removed the Colick like a charm. But these same oleous volatils, or Medicines indued with a volatil oleous Sulphur, are also paregorick, nervine and demulcing; whence withal they do very well help the pains & tensions of the Membranous parts that arise from wind: And these are very good both outwardly and inwardly in many distempers, as the Colick, Vertigo, fits of the Mother, and in the griping pains after Child-Birth, wherein in particular the roots of zedoary and galangal are profitable; in the flatus of the Womb, the rupture, wherein both by mine own and Helmont's experience the four greater carminative hot Seeds are excellent; in the noise in the Ears, &c.

VI. Or

VI. Or (2) they are *absorbing* and *temperating*, such as not only saturate the prevailing Acid, dry up the Humours, and precipitate the vapours arising thence; but likewise if rarefied bile concur also, they tame the flame, and in one word break these *Surduets*, or Powers, and restrain the Seminal Ferment of the *status*, and the wild exhaling gas; yea, if there be an excessive heat joined, and so a *Phlogosis* or Inflammation of the *Viscera* accompany, as in the Hypochondriacal, they respect the same too. Such as these are both *earthy Precipitators* and *Diaphoreticks*, as especially *Antim.* *Diaphoret.* Shells and Crabs-eyes prepared, &c. and also chiefly *Nitrosalines*, and *Alkalines* likewise, Tartar vitriolate; the tincture of Tartar, *Arcanum duplicatum*, &c. Refer hither Mineral Waters or *Acidulae*, the *Clyssus* of Antimony, &c. These are chiefly good in the bilious Colick, Hypochondriacal *status*, Tympany, Fevers, Palpitation of the Heart, *Vertigo*, and the like. And it is to be noted that these things may also be given mixed, where we would withal Precipitate, and also stop Pains, as chiefly in the *Cardialgia*, or pain at the Stomach, in which case I have often with great success given the Oil of Cloves with Shells prepared, in a dry form; with *essentia carminativa* and the Essence of Castor, in a liquid, &c.

VII. Or (3) they are such as strengthen the concoction and heat, and corrupted *Menstruum* of the Stomach, whether they be *Precipitators* and *Inciders*, as the root of Aron, Ginger, &c. or other Aromaticks and Balsamicks, fitted for whatsoever excess. For as the Stomach is always to be taken notice of in *status*, and as the same do usually arise from the frustrated action thereof; so these very Stomachicks also are deservedly reckoned among Carminatives: and these are particularly good in Belchings, Hiccough, *Cardialgia*, Inflation after Meat, &c.

VIII. The thinnest and potentially hot volatils are not to be used in all flatulent cases, especially in the Hypochondriacal, for whom the more temperate are for the most part better, which may allay the Inflammation or *Phlogosis* of the *Viscera* that is fed by saline and nitro-sulphureous Particles: whence temperating and refrigerating things themselves seem requisite in this case for the destruction of the *status*, in as much as by this means the natural heat will be set to rights.

IX. They are not good if there be a driness in the Intestines, and hard Excrements cause Obstruction: for in both cases unless there be first an evacuation of the Matter and a sufficient depletion, they are all not only in vain, but they also precipitate the Patient into a far worse state. *Crato Conf.* 177. writes that some in the Colick do very badly hasten presently to discuss the *status*, by giving Carminatives; which indeed in a lighter Colick do answer desire; but in the more vehement, generally hurt.

X. As the productive Causes of *status* vary, so does their Cure, whether they spring from an internal cause and the faculty hurt, as they call it, or from an external error. Thus as Pulse, Pot-herbs, things abounding with excrementitious moisture, things sweet, fat, or crass and slimy, feculent, &c. breed *status*; so by obviating crudities, that is, by precipitating them by Acids, Aromaticks, &c. according as the Case is, must we endeavour the Cure.

Cauteries, Fontanels, Inuisions, Setons.

The Contents.

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I. Fontanels, as well as Vesicatories, drain out whatsoever Humours are fixed within the Skin, though in a less compass, or that are drawn through it both from the Blood-Vessels and Nerves: But they do not only, like Vesicatories, pruritate and milk as it were the outer surface of the Skin, but by perforating the Skin also, they convey outwards all that exudes from the sides of the hole by the broken vessels, and that also which is sliding from other places under the bottom of the hole. Wherefore there flow to Fontanels (or Issues) not only those Humours that are heaped up within the

X x x

Pores

Pores of the Skin or the Glands, or which are sent thither by the Arteries and Nerves: but moreover the serous Excrements under the Skin, that use to creep from place to place by the interstices of the Muscles and Membranes, do from every hand tend towards them, and find an exit by them. Besides, an Issue being placed in the way anticipates the Morbifick Humours that are wont to be carried to other Parts that were before weak and long afflicted, and so frees sometimes one Part, sometimes another from their incuse, and like a Bulwark defends them from the Enemy. Hence the matter whether Arthritick, or Nephritick, or Colical, yea sometimes the Paralytick, or otherwise the Scorbutick, as it passes out of its Fountains to its nests or diseased Parts, is often intercepted by Issues, and so is carried out, with the escaping of the usual invasions of the Disease. This Emissary or Outlet also, like water-furrows made to drain the ouziness of the Earth, does by little and little drain out the Humours that are settled in any part or region of the Body, and are there doing harm, and so they either prevent or cure a morbid Disposition.

Willis.

II. From these various ways of helping, whereby Issues are wont in general to profit, it is easily gathered for what Diseases they are chiefly requisite: for though there be almost no Disease, to which this Remedy is either hurtful or unprofitable; yet it seems more necessary in some cases than in others. It is commonly prescribed for almost all Diseases of the Head, both internal and external; for the Convulsive motions of Infants and Children; for their Ophthalmie, and firmous Tumours: Nor is this Remedy in less repute for Diseases of the Breast, as also for those of the lower Belly: Nor is there any Gouty or Cachectical Person but has his Skin as full of holes as a Lamprey. But truly this Remedy howsoever profitable and benign of it self, is not agreeable to all. For there are two sorts of Men, who although they were diseased, may be excused from Fontanels, inasmuch namely as this Emissary evacuates too much in some, and in others less than it ought, and in the mean time is very painful. 1. It is not convenient when it too much evacuates, or spends the moisture or spirits. I have observed in some, that an Issue made in any Part of the Body, pours out an ichor immoderate in quantity, and vicious for quality: out of it namely, very frequently if not always, there ouzes in great plenty a watry, thin and stinking Humour, often colouring the Pease and Coverings black, and by the too great efflux hereof the Strength and Flesh are wasted. The reason whereof seems to be, that in some who have their Blood and Humours ill disposed, when a Solution of continuity is made and hindered from healing, it shortly turns into a stinking and ill favour'd Ulcer; the sides whereof put on the nature of a corruptive acid Ferment; whereby namely the Portions of the Blood that are continually driven thither are so tainted and dissolved, that the Serum having its Sulphur loosened and being imbued with other defilements, is rejected of the Veins and so issues plentifully out there. Moreover this corruptive taint of the Issue being communicated to the Blood doth in some sort deprave its whole mass, and thereby (as also through the too great loss of the serous Humour) renders it at least less nutritious. And from the Sulphur of the Blood's being dissolved on the sides of the Issue and flowing out with the Serum, does the ichor that flows out sink so and blacken the Linnen. Sometimes the Fontanel pouring out no immoderate quantity of ichor, does yet unduly consume the Spirits and Strength, which indeed is known by the Effect, and sometimes only *à Posteriori*; inasmuch namely as some, while they have one or more Issues open, continue languid and lean; but these being

sopt they presently become more brisk and fleshy. Moreover 'tis a vulgar observation, that many upon having an Issue made near their Head, have been taken with some defect and weakness of Sight, so that they have been forced to close it again presently: which seems therefore to happen, because where the store of Spirits is small and their consistence very thin, small expences of them, or of the juice out of which they are bred, if so be they be constant, are hardly born. But 2. Fontanels, as also Vesicatories, are forbidden some (or are warily prescribed) on another and indeed a different regard, namely because, when they evacuate almost little or nothing, they vex and pain very much the place in which they are made. For such as being of a Choleric or otherwise hotter temper have their mass of Blood thicker, and less diluted with Serum than it should be, and its *Compages* too strict, in such I say a solution of continuity being made and continued for the Issue, the Blood it self sticks in the passage, and so being extravasated causes a very painful *Phlogosis*; and in the mean while seeing such an Issue pours out but very little ichor, it is as unprofitable as troublesome.

Idem.

III. The general end of Issues is the evacuation of the matter offending and daily accreving; which evacuation is not to be simply considered, but inasmuch as it does withal either derive, or intercept, or revel the matter. By revulsion the matter is vomited out on this wise: If it be bred in the Liver, or Spleen, or Womb, and tend upwards, we may make an Issue in the Thigh or Leg, always observing to make it on the same side, and hereby is the matter hindered from defiling the upper Parts. Where we must note, that if from the same Parts the matter be sent downwards and possess it self of either the right or left Leg, those do ill that make Issues in the upper Parts to revel from the lower, although they observe the rectitude; for so they draw back the malignant matter, offending either in quantity or quality, to the upper Parts, not without hurt. *Aquapendent*, p. 1. *Oper. Chirurg. cap. 95.* when the Foot was swelled, made an Issue above the Knee, which besides that it revels, does moreover intercept the matter, and stops its course so that it cannot fall down to the Foot: And I following his steps have cured many of a Swelling in their Feet, especially if it were about the ankle, by making an Issue in their Leg below the Knee, and such Patients continue very well still. But I must observe that in Men I alwayes chose the outside, and in Women the inside, because of their Womb.

Glandorph Gazoph. c. 15.

IV. Before they be dried up, there are to be consider'd the Age, the constitution of the Body, the matter offending, the Part sending and the Part receiving. If an Infant be troubled with the Falling Sickness (for instance) and an Issue be made in the nape of the Neck, a regular Diet be withal prescribed the Nurse, and fitting Medicines given, whereby the fuel of the Disease may be substracted and the Head strengthened, so that there be no suspicion of the return of the Malady for a year together, the Issue may be safely closed up, lest if it be kept any longer open, the good juices flow out as well as the bad, and the Part be more debilitated. In a man of middle Age his present state is to be compared with the by-past; which if it be become better, and, while the Issue has run, he have not suffered a relapse, it may by little and little be obliterated in the nape of the Neck or in the forehead of the Head, by lessening the Pill by degrees, making a new one in the Arm for security, which also after a while may be dried up. But let old Men wear them to the last, those namely whose natural heat is weak, and in whom there flows out plenty of matter. We must consider also in Women with Child whether the innate Heat be so brisk as altogether to consume the Morbifick matter;

ter; or whether the offending matter find some other way. From all which we may infer, that there is no definite time of wearing an Issue, and that Death does not always follow closing of them up. If any object the Authority of *Crato*, who affirms, that Death hath followed upon closing up of Fontanels, let him know that *Crato* speaks of that drying up which depends, not upon the defect of matter, but the force of the expulsive Faculty, which is not so strong as before; whence the matter being shut up in the *Viscera* causes Death itself: but it is otherwise if it be dried up either by Art, or by Nature's not breeding that matter any longer which used to be thrown off by the Issue.

V. One being very long afflicted with a Pain in his Loins, at length died: Amongst other Remedies a little before his Death a Cautey had been affixed to his Thigh four fingers above his Knee; from which upon separating the Eschar, there flow'd about half an Ounce of a certain *Sanies*, and afterwards every day an Ounce or more of true and laudable Pus or matter. When he was dead his Lungs were found Purulent; there was a great abscess in his Loins, from which there was found a small chanel reaching even to the Issue in his Thigh, through which part of the matter had flow'd out. Here does Nature's cunning appear which formed that duct for Purging out the matter of the abscess, which yet she could not go through with, being overcome by the plenty of matter.

Another being past Sixty years old, was so grievously troubled with Obstructions of the *Viscera*, that even his Abdomen and Thighs were extended with a Phlegmatick tumour; with Thirst, loathing of Meat and other Symptoms. The best Diet being prescribed him, and his Body being prepared and also sometimes purged with Rheubarb, Senna, &c. Strengtheners being added, at length with a potential Cautey we made him an Issue in the right Ham; from whence serous Humours flow'd so plentifully that he recover'd beyond all hope: for Nature discharged the excrementitious Humours to the Issue as to a common Sink.

VI. A Cautey or Issue in the *Sinciput* or fore-part of the Head is profitable for many Diseases, especially in those who have this Part not Membranous but Bony, that is the fit place where the tip of the middle finger will end if you lay the root of your Hand to the end of your Nose, according to *Mesue*, not betwixt the Eye-brows (as commonly) as *Zacutus* consult. admonishes. 1. If the Surgeon be doubtful, it is better to make it a little higher, as *Aquapendent* bids: The Cautey is not to be made beyond the *Pericranium*; it is enough if it be touched, or only just perforated without going further, namely by taking away the *lamina*, which *Albucasis* bids us avoid. An actual Cautey is always safer than a potential one. 2. Practitioners disallow an Issue in the *occiput* or hinder part of the Head, because it can hardly be kept open or the Pease kept in: the true place is the nape of the Neck, where the Head is joined to the first *Vertebra*. 3. In the Neck the fittest place, according to *Aquapendent*, is betwixt the first and second *Vertebra*; others chuse the space betwixt the second and third. Let it not be made on the Process of the *Vertebra*, nor on either side, but just in the middle. 4. They are made more commodiously and profitably on the inside of the Arm than the outside: the proper place is betwixt the *deltoides* Muscle and the *biceps* where the cephalick Vein runs; because there it may be seen and come at, it is betwixt the Muscles, and is near the cephalick Vein, which circumstances fail if it be made in an uncouth place. 5. Issues are usually wore above the Knee, both on the inside and outside of the Thigh, about an hands breadth above the Knee: when they are made on the outside, it must be betwixt the extending and bending Muscle of

the Leg; when on the inside, betwixt the extending Muscle, the *vastus internus* and adduct. The outside is to be quite rejected for the broad tendon that is there spread under the Skin, which being hurt, as *Aquapendent* and *Hildanus* testify, grievous Symptoms follow: the inside is more profitable because of the Crural Vein descending that way. 6. In the Leg they are made in three places: *Spigelius* in the *Sciatica* made one in the hinder-side of the Calf with good success, because the *Vena Poplitea* runs that way: The internal place is three fingers breadth under the Knee: this is very commodious for Women in regard of the *Saphena*; but less fit for Men, because of Riding: for the outside is better for these betwixt the *fibula* and *tibia* in the interstice of the Muscles, where there is a Vein, though not so plain as on the inside.

VII. Observe these conditions in making an Issue: 1. Let it be made in a place which may be seen, order'd and kept clean by the Patient; chiefly in the Limbs. 2. Let it be near the larger Veins or their branches, not upon them. 3. Let it not be made upon the very body of the Muscle whether its tendinous or carnosus Part, but in the interstices of the Muscles; that the Humours flowing that way may be the more easily evacuated. 4. Chuse a place fit for ligature.

VIII. 1. The Ears being bored supply the place of a Fontanel evacuating from the whole: Nature hath pointed the way as it were with her finger. Some have a little hole in the lobe for Ear-rings. There is a wonderful consent of the lobe of the Ear with the rest of the Body, whether through small Nerves, or by small Arteries from the *Carotides*, or Veins from the Jugulars. If in the greatest heat you sprinkle the lobe with cold water, you will perceive the whole Body to be cooled. In *Egypt*, as *Alpinus* testifies, the scarifying of the Ears is common. Having perforated the lobe of the Ear, put a longish tent into the hole made of the bark of the root of spurge Laurel, turning the inside of the bark outwards and rolling it up round. Let this tent abide therein till the Ear and the neighbouring Parts begin to swell: then let the tent be lightly moved, that the store of Water that is collected may flow out, which being exhausted, the swelling of the Ear will fall, and the Ophthalmie be asswaged. ¶ One will hardly believe how great a deal of serous Humour we have often seen to be drained out by such holes as these, so that that quantity could hardly flow out by a Seton in ten days, which has sometimes run out by these Emissaries. Nor have we seen this Remedy of much avail in Fluxions upon the Eyes only, but also upon the inferior Parts, especially the external, as the Breast, Teeth, Joints, &c. and I have seen many cured by it of an imminent *Phthisis* from a thin and sharp distillation; others also of inveterate Head-achs: and I think it a Remedy deserving to be recalled into use by Practitioners in both averting and evacuating Fluxions. Let the hole be made with a threesquare Bodkin, and putting in pieces of the root of wild Olive (or the like) afterwards cover them over with *Emplastr. Diachylon cum Gummi*, and change them twice or thrice a day, if there be occasion, like a common Seton, for a long time together.

2. *Zacutus Prax. admir. lib. 2. Obs. 160.* applies a Cautey behind the Ears, and commends it for all distillations from the Head; the same is commended by *Riverius* also in Fluxions of the Eyes.

3. There is a new place found out by some in the Neck near the Jugular Veins, in an interstice of the Muscles: by the help whereof an inveterate hoarseness was cured in two.

4. Fontanels are very good in the Back, not only for Diseases of the Head, by deriving and evacuating

Fr. Chomel.
apud River.
Obs. 2.
See Willis
Anat. cereb.
c. 12.

Hild. Obs. 74.
Cent. 4.

Barthol.
Cent. 4.
Obs. 80.

River.
Cent. 14.
Obs. 100.

X x x x 2

evacuating the morbiſick matter; but moreover for the Gout, Stone and Colick, by anticipating the fuel of the Diſeaſe, and intercepting it as it is paſſing to its neſts. Which indeed is made good by Experiments and Obſervations taken from the relief the diſeaſed have had thereby. Cauteries between the Shoulder blades are made great uſe of at this day by our Practitioners. None has uſed to make Cauteries on the Back, nor does any uſe to go further than the third or fourth vertebra of the Neck: yet I knew a man, who eſcaped from the fear of a Phthiſis by making an Iſſue in his Back betwixt the firſt and ſecond Vertebra thereof. They were uſual with the famous Theodore de Mayerne, who made them over againſt the upper corner of the Shoulder blade, at the middle diſtance betwixt that and the Spine; commanding five, ſix or more Peaſe to be put in it, which a ſticking Plafter was to keep in. The moſt illuſtrious Seguere, Chancellor of France, that liv'd to above Ninety, lengthen'd out his life by the help of theſe, putting an heap of Peaſe in every hole.

5. This is now much in uſe amongſt us: Make two Iſſues in the hinder part of the Neck, beſide the fourth and fifth Vertebra thereof, ſo that the Spine be betwixt them, and both may be ſerved with one Plafter.

6. Amatus Luſit. hath propoſed an Iſſue to be made in the hollow of the Arm pits. * Tho. Fienus in curing the Plague made two in each Arm pit. A Young man about twenty being troubled with a Fluxion upon his Lungs, threatening a Phthiſis, amongſt many other Remedies found the chief to be an Iſſue made in each Arm-hole, which within a Month recover'd him by deriving powerfully the Fluxions ſliding down to the Breſt, and the Humours contained therein.

7. For Diſeaſes of the Breſt Iſſues between the Shoulder blades, alſo in the Arm, or Leg, are good, to evacuate or anticipate the Humours that are flowing towards the Lungs, as alſo to call out thoſe that are already depoſited there. We know by Experience how an Iſſue made in the thorax it ſelf between the Ribs doth ſometimes more immediately derive the ſtabiſick matter from the Lungs. Aquapendent commands to make two Iſſues in the hollow under the middle of the Collar-bones againſt deſtillations upon the Breſt.

8. The region of the Abdomen ſeems unfit for the wearing an Iſſue in any part of it; yet ſome mens Practice (though more rare) is much cried up for all Hypochondriack Maladies, who by a Cautery burn a large Fontanel that will hold many Peaſe, above the region of the Liver. I have known this done in ſome with no great benefit, however not ſo great as might recompence for the trouble of ſuch a Remedy.

9. By an Iſſue in the Groin I have ſometimes happily cured a great Lumbago or pain in the Loins, that would yield to no other Remedy; and in another an inveterate Sciatica. For the glandulous Emunctories that are in that place do imbibe very many Recrements of the Blood and nervous Liquor, which if they be forthwith and continually ſent from them by a fit emiſſary, muſt needs contribute much to free the neighbouring Parts from any Morbiſick Matter. Such have Iſſues made in the Groin as are not Married, and ſuch as are well in years: Gul. de Saliceto approved of them for the Colick and Pains of the Bladder; Jac. Fontanus, for the Gout; Santorellus, for a ſtubborn Itch: the Hydrotical and Cachectick have found great benefit thereby. I have put a Pill in many ulcerated with Venereal Bubo's that were now healing up, for a peculiar drain to an infeſted Liver, which being kept in a long time did much good.

10. Four fingers breadth below the Groin an Iſſue being made in the middle line of the Thigh is very good for curing the ſame Diſtempers: For through

the middle of thoſe Muſcles on their outſide, there run down notable Veins, whoſe twigs upon occaſion may eaſily vomit out whatſoever is ſuperfluous above in the Body. Placentinus made an Iſſue in Monks (for the hurts which happen from continual kneeling) on the inſide of the Thigh, two or three fingers breadth below the Groin, in the interſtice of the Muſcles, near where the crural Vein is.

11. I have experienced in my ſelf, that an Iſſue made in the Calf, betwixt the Heads of the Gastrocnemius Muſcle, does greatly mitigate Pains in the Hip. Spigelius indeed commends the making of an Iſſue in the Calf at the meeting of the Heads of the Gastrocnemius: but becauſe this place becauſe of its declivity is very inconvenient to be tyed, I choſe (according to Veſalius) a place a little higher, and there made an Iſſue, not without reaſon, for this Iſſue has all the conditions of a good one, 1. The Vena Poplitea near it, which both the Ancients and Moderns uſe to open with good ſucceſs in the Sciatica, and many other Diſeaſes; 2. It has the interſtice of the Heads of the Gastrocnemius, and there is no fear of hurting that pretty remarkable Nerve that runs under the Knee; for where the Iſſue is made, the Nerve in its deſcent has already ſunk deeper; 3. It has a firm place for the ligature; 4. It has the convenience that the Patient can order and dreſs it himſelf.

12. One may uſe a Cautery for a perfect Sciatica, in the bending of the Buttocks, at the extremity of the muſculi glutæi, (where the motion of the Thigh bone is perceived above the joynt,) when the Humour is contained in the cavity of the articulation.

13. Sometimes for averting fluxions upon the Thigh, an Iſſue is made upon the Loins on each ſide the Spine.

14. Under the Knee it wants all danger, if it be rightly made: the joynting of the fibula with the tibia muſt be ſhuned, where there goes forth a very ſtrong ligament, which being touched by the Cauſtick cauſeth great pain.

IX. The Lobe of the Ear, as was ſaid before, has a notable conſent with the reſt of the Body. It is perforated without hurt, and becauſe of the Carotid Arteries and Jugular Veins, the Veſſels of the Head that creep through the Cheeks and Gums, ſuch perforation is good in Diſeaſes not only of the Head but of the Eyes and Teeth alſo. Valleſus ſaw ſome Empiricks burn with a Cautery in Perſons troubled with the Sciatica, the inner part of the Auricle, where the Cartilage folded back as it were makes a kind of tumour, ſome of whom received help thereby: He gives the reaſon, becauſe in many Iſchiadick Perſons the matter flows from the Head, and is intercepted by the inuſtion of that place. He learn'd the ſame of the Saracens. For a periodical pain in the Teeth Spigelius knew no readier Remedy than with an hot Iron to cut that part of the Anthelix, which above the concha immediately touches the upper part of the tragus, and then to heal up the Wound again. Bartholine ſayes it is a ſingular Remedy for an ophthalmy.

X. It is vulgarly queſtion'd whether an actual cautery may be applied to the ſinciput without prejudice. Answer. Though very grave Authors ſuſpect the uſe of fontanels at the meeting of the coronal and ſagittal ſutures, which the Greeks call βέρυμα: yet becauſe many as well as my ſelf, from the frequent experience of a good ſucceſs, do much commend it for the curing of the ſtubborn diſtempers of the head chiefly; and ſeeing J. C. Claudinus, Reſp. med. 3. T. Fienus lib. 3. de cauter. c. 22 and M. A. Severinus pyrot. chir. lib. 2. p. 211 c. 11. have ſufficiently ventilated that queſtion, I will not alium agere, but remitting the Reader to the cited Authors I ſhall paſs to the manner of adminiſtration. For the accurate finding of the Bregma as well later as

De hum. Corp. Fabr. lib. 5. c. 9.

Scult. Anatom. obſ. 72.

Riol. Enchirid. lib. 5. cap. 4.

Fab. Hildanus Cent. 1. obſ. 94.

6 Epidem. 5. 21.

Cent. 4. hiſt. 89.

Willis.

River.

Barth. Cent. 4. Hiſt. 83.

River.

Cent. 6. cur. ult. Lib. 4. De Cauter. c. 17.

Riv. Cent. 2. Obſ. 61.

Willis.

Willis.

Willis.

ancienter Surgeons have invented divers ways, all which *Aquapendent* reckons up, concerning Fontanels in the Coronal suture. For the finding out of the meeting of the Coronal and sagittal suture I join *Avicenna's* and *Celsus's* way together; And having shaved the Hair enough I draw a thread from the middle of one Ear to the other; then another from the top of the Nose to the Crown of the Head: and where the threads do intersect one another and make a cross, there I think the *bregma* to be, or the place for making an Issue. As to the manner of operation, the Surgeon holds a cold cannula or pipe in his left hand, by which he presses strongly upon the Skin being marked with ink, that he may defend the neighbouring parts from the fire, and allay the pain; and with his right hand he thrusts into the cannula a rod of Iron heated red hot, and coming with it to the Skull turns it about until he have made some print with it in the Bone: To hinder the Inflammation of the *pericranium*, (which omitting the turning about of the heated Iron were easy) and to promote the evacuation of the offending matter, (which also is done by little and little through the pores of the Skull) I use that Iron which *Aquapendent* called the hollow and simply incising: With this Iron heated red hot and put in the above named cannula, we make a fontanel at the meeting of the coronal and sagittal suture, not only burning therewith, but also cutting, through the sharpness of the instrument. This hollow instrument, as soon as it has touched the Skull, is so long to be turned about, till it have made a plain print upon it. Many Moderns disapprove of the use of this same Instrument, not only because of the pain which they think it causes, but also for fear of a dangerous Inflammation in the *pericranium*, which might be communicated to the *dura mater* that is spread within the Skull, through the conjunction of the sutures; whence rejecting this hollow one, they make use in its room of one called *Solid and uniform*: But in my opinion the hollow is to be preferred far before the Solid, because this latter may more easily cause the aforesaid inconveniences than the former: I add, that the injection of the sutures that is performed by a solid Iron, proceeds too slowly through the thickness, hardness and density of the Skin of the Head: whereas all the Chirurgical administrations, especially those that are performed with red hot Irons, should be done as quickly as may be. Wherefore our Modern Surgeons deservedly reject burning instruments, not the simply hollow and incising, but those that are starred and toothed; because the former by reason of the star cannot be turn'd about at all; and the latter, because of its teeth, not so readily; wherefore they are unfit to make fontanels in the *bregma*.

XI. For making an Issue we use sometimes an actual cautery inclosed in a case, that the sight of the fire may not affright; sometimes a potential one, whose use is now double, under a solid, or a liquid form. But it is more certainly and speedily performed, if the Skin being raised on each side be divided with a lancet, and a pease be presently put into the interstice or slit, which swelling by the moisture that flows to it, keeps the place always open; for so the fall of the Eschar is not to be tarried for, which uses to be a long time in separating; nor is there any fear lest the caustick being melted should spread it self through a large space of the Skin, whose surface alone while it corrodes, it cannot reach to the depth of the interstice of the muscle.

XII. *Albucasis Chirurg. part. 1. cap. 1.* comparing an actual and a potential Cautery in general, prefers the actual; because fire is simple, whose action reacheth no further than to the part that is cauterized, and hurteth not considerably any other member that is joined to it; but a Caustick

Medicin runs about and takes up a larger space. These things some apply to fontanels, and prefer actual cauteries. As for my self, I only admit these in those places wherein we would both evacuate and strengthen, as in pains of the Hip: but in those places that are only to be debilitated, I prefer Potential. ¶ That my opinion drawn from experience and reason may be known, I confess freely, that I had rather have six Issues made in my Body with an actual fire than one with a Potential, and I have tried both: and all the Issues I have made these fourteen years, except two, were either made by an actual cautery, or by Section. For an actual Cautery causes more fear than pain, and a potential the contrary: Besides, the Eschar from an actual falls off on the third, or on the fourth day at furthest; but that from a potential sticking more closely is not separated under eight or nine days, as being founded deeper. Moreover by a red hot Iron there is made a round Ulcer and no larger than is desired, and, according to *Celsus*, an Ulcer that is not apt so to heal up: but a Caustick Medicin, though it be very well fenced, does nevertheless communicate its virtue to the neighbouring parts, and makes a broader and deeper Eschar, especially in loose, rare and soft Bodies: so that I am of opinion that potential cauteries were only invented to please, and to take away fear, not that they are safer or better than Actual.

XIII. We must take diligent heed where a potential Cautery is applied, that the Eschar be not burned too large or too deep; for this is not only odious and painful, but also the Issue is made as it were useless thereby; the capillary Veins namely being eat asunder, by which Nature ought to have expelled the offending Humours. Sometimes also the Nervous parts are hurt by the Caustick, if it have made a deep Eschar, for hence there follows a great and continual pain, and other Symptoms: And if an Artery or Vein be withal eat asunder by the Caustick, there follows both a great and dangerous Hemorrhage; which I have seen in one in whom the Caustick had gnawn asunder the Cephalick branch, from whence some pounds of Blood issued. We must take heed also that by melting, it spread not too far: If the Eschar be too broad and deep, when the Ulcer closes up, the Mouths of the capillary Veins are stopp'd with a *callus*, and the Issue becomes less fit and profitable.

XIV. Potential Cauteries, if they be imprudently applied, introduce pain and other Symptoms. An Apothecary having applied a Caustick himself under his right Knee, not knowing the true place, was taken a little after the application, with a cruel pain, Inflammation, Fever, with fear of Convulsion: healing up this Ulcer, we made another Issue, which as yet he keeps open with benefit.

XV. When I advise to make Issues with Causticks, I take care that they eat so deep as till they have fretted asunder the Membrane of the subjacent Muscle. As for example, such as have painful Ulcers in their Feet from the incursion of an acrimonious matter; to stop this incursion I make an Issue by a Caustick in the Leg a little below the gartering place, at which the matter as it glides down is spued out: but, as I said, I see that the investing Membrane of the subjacent Muscle be penetrated, lest the acrimonious matter glide down into the Feet the way that it is us'd to do, viz. betwixt the Membrane and Flesh: and after the Membrane is eaten asunder, care must be taken that it close not up again together with the Flesh; for in vain should a Man be troubled with an Issue without benefit.

XVI. I admonish that none be deceived with the Malady and misery of the receiving Member, making an Issue near it while the Humour comes from elsewhere: but we should always inquire

Rollinc. de
Febr. c. 83.

Glandorp
gastrophyll.
c. 5.

Idem
c. 11. ar.

Idem
c. 13.

Idem
Epist. 64.

Hild. cent. 1.
obf. 94.

Hearn. Meth.
ad Prax.
lib. 1. cap. de
cau.

Scul. Ar.
mam. ab. 26.
d. c.

Van Horn
microtechn.
p. 180.

out the original of the fluxion, and there apply the Remedy: Otherwise it muſt needs cauſe a greater or a new evil; for this is the chief indication of this Remedy, namely, that it may readily purge out the matter that is apt for fluxion, by a region that is diſtant from that part to which it is prejudicial.

Merc. de
Ind. Med.
l. 1. c. 16.

XVII. It ſhould be none of our leaſt cares to ſee, that the Perſon who is to have the Iſſue made, be not Cachectick, that is, be not of a corrupt habit, or vitiated *viſcera*; moreover, that he be not full of ill Humours and unpurged: for in ſuch Bodies this Remedy is apt to produce Malignant Ulcers.

Sev. Medic.
effic. p. 256.

XVIII. Some in England are ſtiff of opinion, that an Iſſue, whether one or more, diſpoſes to Barrenneſs; on which account married Women and ſuch as deſire Children are ſtrictly forbid the uſe of this Remedy, though it might otherwiſe conduce never ſo much to their health: for which interdict yet no reaſon is given, but only ſome ſtories of certain Barren Women that had Iſſues are alledged, when it were as eaſie to relate more that have been Barren without them, and many fruitful with them. And indeed I am wont to retort this argument chiefly againſt that opinion, ſeeing there is no need to confute it otherwiſe.

Willis.

XIX. A Woman having for many years one foot very much ulcerated, had an Iſſue in the other: being wearied with the trouble of them, ſhe got them healed up; upon which preſently enſued a difficulty of breathing, yet without loſs of appetite: At length there followed a ſwelling of the Face, and of the whole Body through the Humours ſtagnating and having no vent, and a little after death. Being opened, there was found an abſceſs in the left ſide hard by the Spleen.

Horſb. obſ.
15. Lib. 9.

XX. As *luxuriant fleſh* ſometimes grows on diſmembred Limbs, ſo alſo in the cavity of Iſſues: nor muſt we believe that that mucor or proud fleſh, as 'tis commonly called, proceeds from the excrementitious Humour that we would have evacuated; but that Humour is turned into ſuch matter, which if the part were intire, would paſs into its nourishment: And hence ſome wear Iſſues without any benefit.

Hoeſer. Her.
Medic. lib. 1.
cap. 4.

Sometimes it happens that an Iſſue, like a ſpring dried up, pours forth little or no Humour, either becauſe the hole being not deep enough penetrates not through the whole Skin, which is eaſily cured by making it deeper; or the Ulcer, though deep and large enough, yet remains without liquor, becauſe the *Serum*, through the too ſtriſt compages of the Blood, does not eaſily and plentifully enough ſeparate from its maſs; and then the only Remedy is, to wear in the hole ſuch ſolid things as irritate much and notably twitch the mouths of the Veſſels. For which purpoſe Pills of Ivy, or Box, or of the Roots of Gentian or Hermodaſtyls are made and uſed with good ſucceſs.

Willis.

XXI. Where a Cautey is applied to attraſt the matter creeping upwards, as in a ſympathick Epilepſie, after the falling of the Eſchar let a Cupping-glaſs be often applied.

River. Pract.
lib. 1. c. 7.

XXII. Having premiſed ſuch things as were neceſſary, I applied a Seton and a potential Cautey to a man of ſixty that was troubled with an old and great pain in his Head: Four dayes after a Phlegmatick tumour roſe in his Arm, which waxed ſo that all his Arm ſwelled from his Shoulder to his Fingers ends, like the Legs of Hydropical Perſons. I uſed Remedies to prevent the extinction of his natural heat: and at length the ſwelling was quite ſcattered. Twelve dayes after, the like tumour ſeiz'd upon the ſame Parts, which afterwards waſted away in a good part, though not wholly. Many were of opinion that theſe things happened by reaſon of the Cautey's being applied upon ſome Nerve; but it appears by Anatomy

that they were miſtaken, for the Nerves lie deeper there than to be toucht by a Cauſtick; moreover it was not laid upon the tendon of the *deltoides Muſcle*, but much higher. After three Months, his Arm being ſwelled like the Legs of Perſons in a Dropſie, he died of a lingering Fever. There was no Gangrene, lividneſs or pain, except a little lumpiſhneſs. But I refer the cauſe of the ſwelling of the Arm to an hard, inveterate, immoveable, painleſs and livid *Scirrhus* that lay hid in his Arm-pit and was faſten'd to the Ribs, and not to the application of the Cautey; though I doubt not but his death was in ſome manner haſten'd thereby.

Cl. Chaphu-
ſius ad Fabr.
Hild. Cent. 4.
obſ. 73.

XXIII. In preparing Cauſticks this one thing is to be noted, that thoſe things be made uſe of that want an aſtringent vertue, ſuch as is quick lime: for thoſe Cauſticks that are made of Vitriol and the like, ſeeing they have an aſtringent vertue, the Eſchar that is made by them is longer a falling off: wherefore we ſhould rather uſe theſe where we would ſtanch the Blood that burſts forth upon the eroſion of Veſſels.

Mich. Ga-
vaſſetius l.
de nat. cau-
ter. c. 12.

XXIV. Sometimes there has riſen a ſpontaneous Ulcer in the interſtices of the Muſcles and in the cavities of other Parts, which hath helped and removed ſome great Diſtemper of the Body: In that place therefore there is to be left an Iſſue for ſome time. 'Tis a thing which I have experienced to be profitable and therefore I adviſe it, yea and reaſon it ſelf alſo perſwades it.

Sever. Med.
effic. p. 235.

XXV. If the Body be foul, and full of Humours, an Iſſue is not to be made, till proviſion be firſt made againſt the accidents that uſe to happen, by ſome general Remedies; for grievous things are ſometimes raiſed from a ſmall cauſe. There is a late example at hand. In the middle of April, 1681. *Conſtantine M.* our chief Gardener, being about Sixty, came to aſk my advice; I am afraid, ſays he, I ſhall fall into an Apoplexy, for I have a heavy pain on the left ſide of my Head with drowzineſs, yea and my Tongue ſometimes faulters, and therefore I think I have need of an Iſſue. I conſented, if neceſſaries had preceeded, left there ſhould be a haſty irruption of Humours upon the part where in it ſhould be made. He replies, that it was not long ſince he had been purged: and ſo goes outright to a Surgeon. The next day a flux of Humour fell upon his Lungs and upon that Arm to which the Cauſtick had been applied, hereto ſent a Loofneſs joyn it ſelf with a Fever. I being ſent for ſaid that the fluor was to be let alone, and that there was no thinking of Bleeding (which he preſt for) until his Loofneſs were ſtayed: yet he ſlighted my advice, and made himſelf be let Blood in the other Arm, which came forth corrupt and putrid, altogether like to that which is taken from Peripneumonick and Pleuritick Perſons, to wit, cover'd with a white greeniſh and thick Mucilage. He refus'd Clyſters which I would have had him uſe to recal the fluor: He was let Blood again, and the Blood was no better than the former: I was afraid his Arm ſhould Gangrene, but a third Bleeding averted the danger of that, as alſo of the Peripneumonie. The Patient accuſed the Surgeon of unſkilfulneſs, that he had not applied the Cauſtick according to art: I pronounced him free from blame, declaring that the Iſſue was made in a fit place, and that no Nerve run that way: and that if his Body had in the firſt place been freed from the load of Humours, he might have avoided that miſchief. Moreover that it was better that part of the Humours had faln upon the Arm, for otherwiſe they had doubtleſs all faln upon his Lungs, which would have been more dangerous. To his ſwelled Arm, omitting thoſe oils which the Surgeon had uſed, the duſt of Barley and millet flour was applied, upon which the ſwelling abſwaged. In a like caſe *Amatus Luſitanus* diſallows Bleeding

J. Van Horſt
microſc. p.
177.

T. Barbol.
Cent. 5.
lib. 25.

Scult. Arm.
tab. 30. fig. 1.

Glandon.
pne. p. 116.
c. 20.

ing in the opposite Arm, and advises it to be in the Foot of the same Side: but in this case the reliques of an *Erysipelas* did hinder that, which he had been troubled with a few dayes before: And the imminent Peripneumony, that the Lungs might be emptied, perswaded no other evacuation to be made but out of the Arm. See Book II. tit. *Brachiorum affect.* or of the Distempers of the Arms, and § XXII. before.

XXVI. Now a dayes we do not use perforated *forpices* and a red hot Needle to make a *Seton*; but having shaved off the Hair, if need be, and pitch'd upon a place, and having noted lengthways and sideways of the *vertebrae* where the perforation is to be made, the doubled Skin is held up by one Hand of the Servant and another of the Master, and is run through with the point of a strong Lancer, and a Linnen or Silken Skein, which we ordinarily use, is forthwith drawn through the hole: this is afterwards to be anointed with a digestive Medicine in that part that is to lie hid under the skin, and is often to be pull'd this way and that way.

XXVII. Concerning the *Nape of the Neck*, we must be very careful that in making Setons there, we hurt not the Tendons: For I knew a Captain that had a continual pain in this place from having these Tendons hurt with a Seton, though it cured him however of a Distemper in his Eyes.

XXVIII. *Hildanus* (cent. 1. obs. 40.) bids make a Seton with a cold Iron and not an hot; and thinks the former better, because fire does not only dry the part, but causes both pain and terrour to the Patient: But seeing the dryness that is caused by the fire is corrected with fresh Butter, and moreover seeing the heat and an indifferent pain avail much to the attraction of the offending Humours, and that Patients are as much afraid of cutting as burning; neglecting the reasons of *Hildanus* I have with good success (especially in the *gutta serena*) burned Setons in many Patients, which evacuate the Humours that fill the Head, reveal those that are rushing to the Eyes, derive those that flow to the parts of the mouth and to the Breast, and intercept those that are destilling to the Spinal marrow and the joints of the Limbs.

XXIX. In children I prefer a Seton before a Fontanel, because seeing these are restless, the peace is ever and anon falling out, so that it soon closes up: To prevent which, Nurses commonly tie their heads strait round with a fillet; from which strait tying, seeing the Skull in children is soft and cartilaginous, it is compressed and hindred to grow breadth ways, whence from round or globous it is made long, and the same vicious shape is imprinted upon the Brain also, whereby the Natural and Animal actions are depraved. *Hildanus* confirms this with an example, obs. 4. cent. 6. See him also cent. 1. obs. 42.

XXX. *Paracelsus* l. 9. c. 24. would have the wound made lengthways in making a Seton, that the matters may be readilier evacuated through the streightness of the fibres; to whom *Duretus* consents: *Aquapendent* opposes them, 1. because the Skin cannot be taken up and perforated transversely; 2. because the upper orifice would do no service: Being inclined by these reasons, I am of opinion, that the Skin should either be perforated transversely, or else be taken up and run through obliquely, so that one hole may be higher than the other, because the ducts of the fibres succour each hole, and an happier evacuation is expected from both sides. But the hole is to be higher up on that side where the malady is most urgent.

XXXI. Let the bandage of your Issues be moderately tyed; for a looser bandage keeps not the pill in the Issue, and a too strait one presses out all the moisture, and causes the Issue to become quite

dry through the compression of the Vessels. I knew a Lady that wore an Issue in her left Arm for many years with very good benefit, and when it ceased to discharge moisture, she advis'd with me what should be the cause of its dryness, and how it might be helpt? Loosing the bandage I found the place of the Issue so compressed, that there seemed to be nothing but Skin and Bone: wherefore I ascribed the dryness to the strait ligation, and advis'd that leaving off the fillet wholly, she should dress the Issue twice a day and lay some sticking Plaster over the usual one, to keep in the pill, till the withered part should be nourished again, and acquire its Natural thickness. She obeyed my counsel, and the Issue began to run very much again.

XXXII. The Thigh is a Bulky part, & seems fit enough for having many and large Issues made in it, which namely may drain Humours from the whole Body: But yet it succeeds not so well in many; partly because through its shape, which is thick above and smaller below (being withal steep) a bandage cannot conveniently be made upon the Issue to keep in the Pill; and partly because a solution of continuity being made among the courses of several Tendons, it often becomes inflamed and painful; so that it sometimes becomes necessary in a short time to close up again the Issue that was made therein, to take away the trouble of the pain and halting: but in some it happens otherwise and better; because an Inflammation does not always come upon the perforated place, and in such as use to tie their hose above the Knee, the bandage that is made upon it does not slip off.

XXXIII. I am very sorry that *Inuision*, or the *Remedy by fire*, that was so famous and frequent with the Ancients, is left off by our Modern Physicians not without the loss of many Patients Lives; for what Physick does not cure, the Knife does; and what the Knife cures not, the Fire does; and what the Fire cures not, is incurable. For with the greatest success I cure many Diseases by fire, and those desperate, which at this day the Egyptian Physicians do. Alas, why is this sort of Remedy omitted in many grievous Diseases, without cause, seeing it was so successfully used by *Hippocrates*, *Galen*, *Celsus*, *Paulus*, &c.? On the contrary I am wont cheerfully to fly to this miraculous Remedy, although abhorred by our Modern Physicians, and (I call God to witness) I have always found it profitable: but I use it chiefly where there is a cold and moist temperature. *Epiphan. Ferdinand. Hist.* 7. But they made Inuisions, not that Ulcers should be made thereby for a perpetual and continued evacuation, such as are now made by our usual Cauteries, but either for drying, or to call out the matter to the outer Parts, or to intercept it; and they treated them like Burns, and heal'd them up and skinn'd them over as soon as they could: on this manner they healed the greatest Diseases.

At this day the *Chinese*, *Japanese*, &c. undertake to cure almost all Diseases by Inuision. But for this purpose they use not Iron, but *Moxa*, which is made of the downy tops of Mugwort; this they lay upon the part where they would make an Inuision, and setting it on fire, it performs their intention. But they chiefly use it in the Gout. The Reader may find the virtues of those Burns that are made by it, &c. at large in *Wilhel. ten Rhyn's* dissertation of the Gout, part 3. pag. 69. &c. or more briefly in the first Book of this Treatise under the title of *Arthritis*, (or the Gout) where the said Author's discourse is epitomiz'd.

XXXIV. *Vision* either penetrates to the very *pus*, so that it is both burning and cutting; or it is that which is called *Inuision*, that is, a burning that wounds the Skin only and makes a crust, but does not penetrate. By the former burning the *pus* or matter

Scult. Arm.
tab. 52. fig.
2.

Willis.

Scult. Arm.
tab. 30. fig. 2.

Salus in v.
2. l. lib. 2. de
morb.

Glandorp.
gastrophylac.
c. 20.

T. Barzhol.
Cent. 5.
hist. 25.

J. Van Horn
microt. p.
177.

matter is drawn out as freely as by cutting; but not so by the latter or Inuſion, but there are Blifters raiſed by it, that by them Nature may let out what uſed too be gathered inwardly, or may alſo thruſt out by little and little what is already collected, and ſo clear the inward part. Inuſions are alſo good for drying and ſtrengthening the parts, when they are moiſt and looſe, and ſometimes for ſtopping the way of fluxions, to wit by a *vicatrix* the parts are hardened and conſtringed. Hence when we would draw out *Pus* that lies deep, we uſe ſection: If the *Pus* be not malignant, nor the part ready for putrefaction, then only cutting; but if it be, then a red hot knife which may both cut and burn, becauſe fire reſtrains and extirpates putrefaction: And then only we ſhould uſe inuſion, when the fluxion lies underneath not as yet changed into matter, or there are mucors and laxities of the parts, as of the ligaments in the *Sciatica* and other pains of the Joints; or unleſs it may be when we dare not make ſection, though otherwiſe the Diſeaſe requires it; as *Hippocrates* commands, that in ſuch as are ſuppurated within their Breſt, we ſhould make penetrating ſection, that the *Pus* may flow out; (namely adviſing that which the Diſeaſe calls for) But others are content with inuſions between the Ribs, as fearing the greatneſs of the Remedy, and its difficulty in a weak Patient.

Lib. de int.
Affect.

Vallef. com-
ment. in 5.
Epid. p. 462.

XXXV. The uſion of the Joints that was grown out of uſe, has been reſtored by *M. A. Severinus l. de Effic. Medicin.* and I have ſeen him perform the operation juſt after the ſame manner as *Alpinus* deſcribes it, l. 3. p. 101. namely by a pyramid made of Flax and Cotton: He called it the Arabick uſion becauſe it is familiar not only to the Egyptians, but alſo to the Arabians that live in Tents. This Inuſion is good chiefly in pains of the Joints that are cauſed by a cold and glutinous Humour fixed in them: alſo in Phlegmatick tumours, ariſing up and down the ſurface of the Body, for the ſtubborn matter will yield to no other Remedy. ¶ As to burning with crude Flax and *fungi* (or Toadſtools) becauſe *Hippocrates* hath not taught the manner, it is worth the while to open it: Take crude Flax, and twiſt it cloſe, make it up in the form of a pyramid, ſo as that one end of it (or its baſis) may be broad, and the other narrow and pointed: the largeneſs that the baſis is to be of, may be learned by the largeneſs of the place that is to be burnt by it; (only note that the burning will extend it ſelf ſomewhat further than the baſis of the Pyramid is broad:) ſet the baſis upon the part to be burnt, and ſet fire to the other end, and keep it on till all the matter be conſumed by the fire; for the fire creeping along and coming to the Skin, makes the uſion, and which ſeems wonderful, almoſt inſenſibly and without pain. When the fire is out, *Hippocrates* laid a boil'd Onion upon it, till that which was burnt fell off. Our people apply Butter with a Colewort leaf, and ſo keep the Ulcer open as long as is thought convenient. *Hippocrates* ſometimes uſed *fungi*, of which they make touch-wood to ſtrike fire withal with a ſint: The Egyptians make theſe pyramids of old linnen rags filled with Cotton: The Armenians burn with rags alone tyed cloſe with a thread: All which ways indeed are very good, as I have learned by experience: And they differ only in this, that the more denſe the matter is that receives the fire, and the cloſer it is made up, the deeper burning it makes: Wherefore the matter may be varied with reſpect to the place affected, the age, ſex and temperament.

P. Martian.
comm. in v.
25. ſect. 3.
lib. de affect.

XXXVI. The Ancients made uſions in the Abdomen for the ſake of the Liver, Spleen and Stomach, which have grown out of uſe, ſeeing they are painful and obtain not their ſcope: For they

were made 1. to amend the cold and moiſt *intemperies* of the ſubjacent *viſcera*; but it is not adviſable to correct inveterate *intemperies* ſo haſtily, ſeeing a contrary *intemperies* may be eaſily induced thereby: And then an *intemperies*, diffuſed through the whole ſubſtance of the Liver, will not be amended by a ſmall burn with an Iron; for here-to are to be preferred ſuch fit Medicines as may be had. 2. They were made for the evacuation of vitious Humours: but although there be vitious matter in the *Viſcera*, yet becauſe the *Viſcera* are not contiguous to the *peritonæum*, the matter cannot flow out by the Ulcer that is made by the Iron. As to impoſthumes of the Liver and Spleen in particular, *Aquapendent* writes well, To burn the Skin and the Muſcles, that lie under it, and the *Peritonæum* with a red hot ſharp Iron, and to penetrate with it as far as to the Impoſthume of the Liver and burn it alſo, ſeems to me juſt like killing a Man outright that is almoſt dead already: commending that ſaying of our Maſter's, That in deſperate caſes 'tis better to let our Patients dye than to kill them.

Sennere.
praët. lib. 3.
in fine.

XXXVII. 'Tis a queſtion, where there be a Cautery without pain? to which it is rightly answer'd, if we ſpeak comparatively, That there is. For thoſe things that are of greater activity, and forthwith corrupt the part, cauſe little or no pain. Cryſtals of Silver afford ſuch a Cautery, that are made of Silver with *aqua fortis*. Moreover we ſee ſuch a thing in the Body not only outwardly in a Gangrene and mortification, where we may Mechanically and Elegantly as it were conceive ſuch a like cauſtick Salt; but alſo in a painleſs dyſentery, when ſo great an Acrimony comes ſo ſuddenly on the membranous parts, that it forthwith takes away all ſenſe, whence it is then abſolutely mortal.

G. W. We-
del. de f. m.
ſac. p. 64.

Cephalicks, or Medicines for the Head.

(See Book 3. Of the Diſeaſes of the Head in general.)

The Contents.

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I. Cephalick Remedies reſpect either 1. the Membranes and Nerves, and their irritation, tenſion (which is very conſiderable in the Membranes) and twitching; and theſe are profitable in pains of the Head, Falling-ſickneſs, Tremblings and Convulſive motions; whether they be diſcutients; or demulcents with a Baſamick, Sulphureous vertue, ſuch as are *paregoricks*, Germander, Ground-pine, Vervain, Penny-royal, Betony, Roſemary-flowers, Caſtor, Amber, &c. or inverting, and abſorbing acrimony, as chiefly *Cinnabarines*: whence it appears how theſe very Medicines are good both in the Falling-ſickneſs, and Head-aches, and alſo in pains of the Joints, in Pleuritic pains, and ſo in the pains of any part of the Body: The more correct Opiats belong hither alſo. Or 2. they reſpect the Humours, eſpecially the *Lympha* or Serum, and withal the Spirits and Vapours, or thin Streams; and indeed if theſe exceed in quantity, then Evacuators and diverters, that are endued with a volatil oleous Sulphur, ſuch as are good in Catarrhs and repletion,

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repletion, in the Vertigo, Night-mare, for some sort of Epilepsie, in weakness of Memory, &c. as Peony, wild Thyme, Majoran, &c. but if they fail in their due quantity, then Restorers, Moisteners and diluters, as inwardly, watry Medicines, Liquids, Potions, Decoctions, drinking freely, which are necessary in Madnes, Melancholy, too much watching: if the Humours be acrimonious, thin and salt, then fixers and temperers. Or 3. they respect the Spirits, which failing require Restorers, volatil oleous Balsamicks, in particular, Ambergrise, Apoplectick Waters, distilled Oyls, &c. which are profitable for prevention of the Apoplexy, strengthen the Memory, restore the Planet-struck, &c. But if the Spirits are unruly and too plentiful, if they esuate and are enraged, they are tempered by moisteners, and restorers of the Serum, by acids that restrain rarefaction, nitrous Medicines that promote evaporation, Opiats that tye, as in Madnes and Phrensie: whence they are also good in want of Sleep. Or 4. the vapours or halitus, which being excessive, preternatural and extraneous, (inasmuch as the Blood being too halitious, or infected with a preternatural Sulphur, just as we see in People drunk, makes the Spirits turbulent) are corrected as well by gentle aromatics and strengtheners (such as are vulgarly called Hinderers of Vapours from rising up to the Head, and discussers of them, as Coriander, digesting powders, that help concoction and strengthen the Stomach;) as also by acids, which obtund the Sulphureous and Cholerick Humours, as in Drunkenness: But when these Vapours or halitus fail, then roscid vapours (all which yet is more rightly attributed to the Serum imbued with these qualities) are restored, both by moisteners, whence in burning Fevers it is advisable to prescribe Epithems either of Rose-water only, or Emulsions that notably moisten and cool; and also by such things as breed an halitious Blood, by gentle Aromatics, whence both Sennertus and Simon Pauli advise, and experience her self also bears witness, that want of Sleep in old Men is not so well helped by Opiates alone, or by refrigerating Medicines, as by sweet evaporating ones, and such as are endued with an oleous Sulphur; such as are species diambrae, diamelsbi, and Wine it self, which we have known some use with good success, to the end namely that the Serum may be brought to its proper state, and prevail by a resolvable Sulphur. Or 3. Cephalicks respect the pores of the Brain it self, either by opening of them when they are too much shut and obstructed, or by shutting of them when they are too wide and gaping. The pores of the Brain are opened by volatil Medicines, especially Urinous, if at any time they are depressed and closed up through the plenty of Humours, or by subsidence, compression or other causes, and grant not a free passage to the Spirits, as especially in the Palsie, Apoplexy, loss of Speech, thick Catarrhs, in which Distempers such Medicines as open the pores of the Nerves are of the greatest avail; also in immoderate Sleep and the like Diseases, Lethargy, Sleeping Coma and others; as for instance, the Spirit of Sal Armoniack, with which and the Spirit of the Lilies of the Valley I have cured a number of paralytick Persons: sometimes also discussers are to be added. And when the Pores are too wide, they are closed both by Medicines that increase the Serum in substance, and that bestow on the Blood a gentle resolvable Sulphur, whence they are good and are indicated both in want of Sleep, raging deliriums, Phrensie, and in other intemperatures.

II. Cephalicks Volatils are 1. such as are endued with an Oleous, Aromatick, sweet Sulphur, in one word Balsamicks; as the Leaves and roots of Angelica, the leaves of Rosemary, Majoran, Sage, Rue, the wood Sassafras, &c. and their Spirits, Oyls, and Volatil Oleous Salts. And these are withal Paregorick, and pacifie the irritated mem-

branes, and restore the fainting Spirits; yea they correct also the halitus or vapours, and widen the pores. 2. Urinous Volatils, as the most renowned Spirit of sal Armoniack, the Spirit of Urine, whence the tincture of the Sun and Moon (or Gold and Silver) do almost wholly borrow their vertue. 3. Acid Volatils, as the cephalick striated Spirit of Vitriol; Aqua Apoplectica Mulierum, &c. although these are more fixed as it were. Helmont was almost the first that observed, that Cephalicks commend themselves by their volatil Salt. So also Conserves, Condites and other preparations of Vegetables belong hither.

III. Fixed Cephalicks are either earthy, as Perles, Corals, Cinnabar; or Acid, or Nitrous, or watry diluters; and these are of use to absorb and dilute Acrimonious Humours that irritate the membranes, to bind, doze and pacifie the enraged Spirits, and to procure liberty to the pores, inasmuch as they absorb the Acrimony of the Humours.

IV. Cephalicks of a middle nature consist of these mixed, and are divers: The External are either moisteners and restorers of the Serum, as in melancholy, where (for instance) a decoction of the leaves of Lettuce is in use; or being of thin parts, do penetrate; or are refrigeraters and repellents, as in Hemorrhagies, deliriums, where Acids are also good, &c. or are discussers and evacuator, as sternutatories, apoplegmatisms; or anodynes, as *unguentum anabasin. populeum*; or strengtheners, as *lignum sapientie*, &c. oyl of peaches.

V. There lies a great deal in the right administering of these, and it is to be noted 1. in the manner of administering, Such as alter violently and leave an harm behind them, are either to be omitted, or to be used more sparingly: Thus, the too odoriferous dull the Head, especially where the Head akes and is affected by Vapours, whence Styra, Saffron, Myrrhe also it self, and Coriander not prepared molest the Brain, and by consequence all things that are too vaporous and endued with a preternatural Sulphur, do easily disturb the Spirits, and though indeed they shut the pores, yet they are to be used warily: whence also Opiats belong hither, which being given more heedlessly and frequently, especially in Children, do weaken the Head and render it muddy. So likewise very cold things are to be shunned; for although the Brain do bear well enough repelling frontals, yet care is to be taken that its tone be not vitiated, seeing all cold things are Enemies to the Nerves. In like manner it is never safe to heat and dry too much, for thereby the Spirits are enraged, and the pores are too much dilated; thus by the *confectio anacardina* some have been made mad. So in Topicks (which is Heurnius's caution, *meth. ad pr. l. 2. p. 118.*) we must use those sparingly that manifestly astringe, to which hot things are often added, that the rest may penetrate. 2. Neither moistening, nor too liquating and hot things are to be used in Catarrhs; and where the Brain is filled with Humour: hence in Catarrhs, washings of the Head, yea and baths also have no place at all, and some have been observed to lose their Smelling quite thereby. So those that use hot things (as the oil of Amber) whether inwardly, or outwardly, to anoint the Scalp in Catarrhs, by melting the matter and precipitating it into the Vessels, they often cause a Fever and other greater mischiefs. 3. Also Salts whether alkalis, nitrous or acids are less convenient in Catarrhal affections, for they make the Serum the more fluxile, whence it easily finds a way to the more noble Parts, which holds in general also of the other Parts. 4. Acids are good where the Pores are too full, or the Humours and Spirits too enraged and unbridled, as in soporous affections, Madnes, &c. but they are not so good where the Nerves and Membranes are weak, as in the Palsie, and worse yet

Idem.

yet in watchings, where they are to be avoided.

John Jacobus
Wepferus
conf. m.
pro Nephri-
tico.

VI. Cephalick spirituous waters, as also *Aque aurea*, *vite*, and Elixirs are not so very safe, especially when they are taken on an empty Stomach, and, as *Crato* said, they have proved the Waters of Death to many; for they hasten forthwith to the *Viscera*, they harden the Glandules, amongst which the Brain is one, they hasten the Drop-sie and Apoplexy, as I have sometimes observed in Monasteries amongst the Confessors.

Chirurgia infusoria, the manner of its Administration, and Benefit.

IN our time has been brought to light an Operation of Infusion, or a new Clysmatick or sort of Clystering, when through an opened Vein, by putting a small Pipe into the Orifice, there is injected by the help of a Syringe or Bladder some Liquor that is either nourishing, altering, Cardiack or Purging, which passing to the Heart, and afterwards marching through the Arteries and all the habit of the Body, produces the same Effects, but in a shorter time, as if it had been taken in at the Mouth and let down into the Stomach. This Artifice was afterwards amplified by making a transfusion of the Blood of one Dog into the veins of another Dog; yea the Experiment was tryed in two Men, into whose Veins being emptied to some Ounces, was transfused the arterial Blood of a Lamb, who were also better thereupon. Another manner of transfusing Blood was invented out of one man into another. *Joh. van Horne microtechn. Part. I. Pag. 218.* ¶ *J. Jac. Sacks* writes thus concerning the same to the famous *J. D. Maj.* Of what moment the Circulation of the Blood is, says he, the most skilful Industry and Experience of the Experimental College in England does notably teach, which hath found out that Purgers, without ever putting them to the Mouth, do exert their virtues by the help of the circulated Blood: A Pipe is made of the little Bones of Larks thighs, of the shape of those Pipes that are fitted to an Oxes Bladder for injecting Clysters: A purging, or other altering Liquor is put into a small Bladder, especially that of a Carp; then a vein is cut in the Hand, Arm or Thigh with a small hole, and the Liquor is poured into it out of the aforesaid Pipe being thrust into the hole, pressing the Bladder lest the Blood spurt out of the Vein instead of the Liquor's entering into it: When the Liquor is poured in, the Orifice is closed and tyed up: Thus within an hour the Blood is impregnated with the purging Liquor, and communicates the virtues thereof to the Heart by means of the Circulation, and an happy Purgation is effected. The transfusion of Blood out of a mangy Dog into a sound was performed by *M. Thomas Core*, as the Transactions of the English Society in the year 1667. p. 75. relate it: Whereupon there followed no alteration in the sound Dog, but the mangy one in the space of Ten or Fourteen days was perfectly recovered. *Dr. Richard Lower* in his Treatise of the Heart, p. 190. delivers the Method that is to be observed: And the way of preparing the Vein in Man is shewn in the said Transactions from *Dr. Edmund King*, p. 246, &c.

Many things are objected against this Transfusion, but this chiefly, that there is a great difference betwixt the Flesh we feed upon, and the Blood that is transfused immediately into the Veins; that that undergoes great alteration, but this not. To which I answer, That of the three primary Digestions of the Aliment, the first that is performed in the Stomach is of no great moment in respect of the others

that are made of the chyle and Blood in the Heart, Liver, and all the Parts that are capable of nourishment: And although Blood poured in fresh, undergo not the first concoction that is made in the Stomach, yet it undergoes the other two through many Circulations that are performed by the natural Blood, and therefore there is no absurdity to hinder why it should not be transformed into man's substance.

D. Fabricius a Physician of Dantzick, that was greatly desirous to find out what such effects the operation of infusing Liquors into mens Veins had with it, meeting with three fit subjects in the Hospital made these Experiments: First he infused by a Syringe about two Drachms of a laxative Liquor into the *Vena mediana* of the right Arm: The Patient was a strong Souldier, very dangerously clapt, and suffering terrible exostoses or Nodes on the Bones of his Arms: The Cathartick Liquor being poured in he complained of great Pains in his Arms, the Valves wherein did so sensibly swell up, that we were forced by a gentle compression with our finger to straiten the tumour towards the Shoulders of the Patient: After about four hours the Medicine begun to work, not without great disturbance, and it continued its operation the next day, so that he had five large Stools after the infusion. Without the using any other Remedies those exostoses went away, nor remained there any footsteps of the fore-mentioned Disease. The other two Experiments were made the one in a Woman Thirty five years old, and the other in a Girl of Fifteen, that were grievously afflicted with the Falling-Sickness: Both these underwent this operation, whereby we poured into their Veins a laxative Medicine dissolved in an Anti-epileptick Spirit: The first some hours after the Injection had gentle Stools, and the day after her Epileptick Convulsions returned again, but much more gently, and at length they went off: The latter the same day had four Stools, and some the day after, but going abroad and catching cold, and not observing a right Diet, she kill'd herself. It is observable that it was common to all of them to vomit a little while after the Infusion, and that violently and often. The said *Fabricius* having obtained leave to try the Experiment in some that were very much infected with the *Poz*, opened a Vein, and infused into the Blood certain Medicines; which Experiment being made in two, the one recovered and the other dyed. He repeated the same Experiment, pouring altering Medicines into the Veins of the right Arms of three Patients, one whereof had his Limbs distorted with the *Gout*, a second was extremely Apoplectick, the third was brought to Death's door by the Polish *Plica*: The Gouty Person was pretty well the next day, and shortly after betook himself to work, professing himself to be cured: The Apoplectick from that time forward endured no Paroxysm; And many of the Ulcers that arose from the *Plica* were healed, and both these could go about their Business. But the conditions and requisits for this administration, required by the above-mentioned *J. Dan. Maj.* (who hath writ a large Volume of this operation) are 1. That the Physician be warranted by Publick Authority, let the event be what it will: 2. That some regular Remedies have been first used without success. See more in the aforesaid *Philosophical Transactions*.

Clysters.

Clysters.

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I. Most deny that their virtue reaches further than the Guts, and therefore if Humours be to be evacuated from any higher or more remote Part, they advise to take Medicines by the mouth: But experience witnesseth that their efficacy is greater than so; for that assures, that the same Symptoms have followed the use of white Hellebore administered by way of Suppository, as if it had been taken by the Mouth; that three Grains of the glass of Antimony put in a Suppository, have caused two Vomits: For the Colon receiving the virtue of the Medicine, transfuses it by the Arteries into the trunk of the Aorta.

II. The most convenient posture for the Patient to take a Clyster in is learned from the situation of the Gut Colon; it begins at the right os Ilium; from whence ascending it joyns it self to the right Kidney: from thence bending it runs across the Belly to the left side under the hollow side of the Liver and under the Stomach, and so comes to the left Kidney, to which it is likewise joyned: then descending to the left os Ilium, it ascends again by and by towards the upper Parts, but after a short space bending down again, it begins the straight Gut: Let the Patient therefore be placed on the right side, left if he should be placed on the left, the weight of the Viscera should press together the straight Gut and the last part of the Colon (that descends under the Spleen and is knit to the left Kidney) so that the passage of the Clyster into the capacity of the Colon should be hindered, and it should stay all of it in the two lower windings of the Colon; where it will but stay neither for a short while: but if the Patient lean on his right side, the liquor will be easily driven to the bending of the Colon under the Spleen, and so proceed forward to the Valve at the beginning of the Colon.

III. I have seen an abstemious Woman drunk by injecting a Clyster of Wine, which those that were by not knowing, believed that some mistake was made either by the Physician or Apothecary. I saw the like in the year 1658. at Newenburg in a Noble Matron, who being troubled with the wind-Colick, and having a Clyster given her against wind which had a spoonful of Aqua vite in it (a lenient Clyster preceding) fell into a Melancholick Delirium: She forthwith caused all her Relations to be called to bid them the last farewell, affirming that her end was at hand: They all dissolved into tears; but I being satisfied there was no danger from the strength of her Voice and all her Faculties, burst out into laughter: And indeed in two hours time she was freed of both her Colick and Delirium, nothing remaining but Shame for her vain fear.

IV. Hippocr. lib. de v. r. in Ac. for the use of a Clyster requires that the Faculty be strong, and the Age firm: Indeed the Ancients used stronger Clysters; I mean such as were prepared of stronger Medicines, and were wont to inject far more than now, and therefore required more strength to bear it; and they relied on a Clyster as on a more powerful Remedy: for you may very often see Hippocrates (in Epidemis) to make mention of a Clyster as a most Sovereign Remedy in the difficult Cures.

V. We must diligently note, that we do not continue long to inject Clysters in Fevers, when the strength of the Disease is broken and its edge taken off, especially in hysterical Women or hypochondriacal Men, seeing the Blood and Humours of such Persons are easily transmutable, and are exagitated and estuate with almost nothing, whereby the Oeconomy of the Body is disturbed, and the febrile Symptoms afflict the Patients even beyond the usual Period. We must take heed of using them too much, because they make the Guts sluggish and neglectful of their proper Office: Besides that they draw down the Meat before its due time from the Stomach and Mesaraicks, so that the Party is deprived of nourishment and repletion, whence it comes to pass that those that take Clysters void nothing the next day, and therefore the ignorant vulgar think they bind the Belly.

VI. Seeing 'tis known there are four kinds of Clysters used at this day, of a different shape or form, we must inquire, which of them is the most convenient and safe. The first of the four, described by Hippocrates, is known to all, namely that which is made of an Oxe's Bladder, to which a Pipe made of Ivory or Box is fasten'd; which seeing some, especially Women, are through bash-

See Fernel.
l. 3. m. c. 2.
Sect. 5. Hild.

Per. Boel.
Cent. 1.
Obs. 56.

Vallet. Comm.
in eum lib.
Pag. 44.

Syden. Obs.
in Acut.
p. 360.

Mercat. de
Prax. Med.
lib. 1. c. 3. 8. e.
Tulpius lib. 1
3. cap. 16.
Obs.

fulness unwilling to make use of, another second kind has been invented, which any one may himself alone put into his anus, the invention and description whereof we owe to *Gul. Hildanus Observat. lib. 1. cap. 77.* The third sort was first brought to us from France within these few years, made of Tin, and more like a Syringe than the two already described. The fourth kind, which is the latest of all, was invented by the English, being made of a Skin or Leather, but through which neither is Oil nor any Decoction injected into the anus (for which Uses the three kinds already mentioned are made) but any one that will may puff up the smoak of kindled Tabaco by the blast of his Mouth or upper Throat into the anus or lower Throat (that I may speak with *Plautus*) the accurate Description and Figure whereof the Excellent *Tho. Bartholine (Cent. 6. Histor. 66. Rissor. Anatomic.)* has given us. Now which of these would we commend to such as are afflicted with Colick Pains, especially, if we would not exasperate them? Indeed seeing 'tis observed that all Patients are not eased by Clysters, there is surely some choice of them to be made: I think it therefore most adviseable to use either the first or second sort when we are troubled with the Colick, for these are the fittest for moderating in a convenient quantity, and as it were ruling with our hand as we please, the Decoction that is to be injected: And if the *status* shut up in the *Cæcum intestinum* (which we have determin'd to be the receptacle of *status*) and in the cells of the Colon strive to get out, whilst the Decoction is injected by the Pipe, these *status* may conveniently be received into the Bladder that is now almost emptied of the Decoction; for which purpose it were moreover convenient (for 'tis easie to add something to Inventions) to tie to the Bladder a little Pipe, besides that which is thrust into the anus, whereby the *status* may break forth and vanish into the Air, as the smoak out of a Vent-hole or Chimney, which little Pipe is to be stoppt with a Cock (or the like) till there is occasion to turn the Cock and give vent to the *status*, which sometimes otherwise break forth with that violence into the Bladder (being almost emptied of the Decoction) that if it be not compact enough they break it, and flying out with the Decoction bespatter shamefully the face of him that administers the Clyster; or which, if they find no vent, are driven violently into the Intestines again: which when it happens, without doubt that Pain in the Intestines is exasperated which 'tis desired to assuage by the Clyster, but in vain: but the Belly being extimulated by a Suppository or Clyster, if the *status* find a passage, they go out through the freight Gut according to desire. When therefore any is ill of the Colick, the two kinds of Clysters just now mentioned may be advised. When any one is Sick of the Iliack Passion or *Volvulus*, the French Clyster is to be recommended to him, as whereby the Intestines are far more impetuously distended than by the former, which *Hippocrates* commanded to do, and made tryal with a Pair of common Bellows. As to the profit or Commodity of the English Clyster, I partly suspend my judgment, as thinking it not yet to be clear enough what I should pronounce of it; yet I deny not but that the smoak of Tabaco, being Acrimonious and Narcotick, when it is to be pufft up into the anus should affright many Patients, because of the Vessels of all kinds, Veins, Arteries and Nerves that end in the freight Gut and Sphincter of the Anus (to say nothing of the Bladder that grows so the freight Gut) of which consult Anatomists: What therefore will be done thereby in them who being in years expect both the external and internal Hemorrhoids, whose Anus or Womb is apt to fall out, who Piss in their sleep, or from whom the Seed is prone to issue? Whether may not these Parts mentioned be easily taken with a Palsie, when the Narcotick faculty of the Tabaco hath as it were bid

battel to them? Yet I deny not, though *Nardus Antonicus Recchius (lib. 5. rerum Med. Hist. novæ cap. 51.)* demonstrate Tabaco to be Narcotick, not because it is cold, but because it is hot, of an acrimonious taste, dry and hot in the third degree, and wonderfully drying up Phlegm; I say, for all this, I do not deny but European Women, that are subject to the more grievous Symptoms of the Womb, may by the help of the English Clyster assuage such their uterine Symptoms, putting it into the neck of their Womb and driving the Tabaco smoak into their Womb it self, without making use of that Chair which *Neander* describes in his *Tabacolog.* And the foresaid *Recchius* teacheth, that the smoak of Tabaco, breathed in, is not only a Remedy for them that labour under difficulty of breath, but that the same is exceeding good also for the Distempers of the Womb, and especially for the Suffocations that are wont to happen through its ascent; for by the application of this Remedy it is restored into its place in an instant, swooning and straitness of the Breast are removed, and Death which was in a great measure let into the sick Womens Body, is removed, &c. When therefore 'tis every where directed to fumigate the Womb by a Funnel in certain Distempers, the English Clyster is most to be recommended for that use: Likewise when *Hippocrates* in the *volvulus* or twisting of the Guts does therefore commend the use of a Pair of Bellows, that simple blowing (or wind) may distend the Intestines, and free them from the hard Excrement, no Instrument can be found more ingenious than this English one to distend the Intestines by mere wind, without any Tabaco smoak.

VII. *Laurentius* in his Anatomy discusses the question, whether a Clyster can nourish, and whether any concoctive Faculty is to be granted to the Intestines? But we must believe Experience, and yield to Reason which also consents; for there is the same condition of the Stomach and Guts; their neighbourhood and connexion persuade that. In *Hildanus (Obs. 30. Cent. 4.)* a Matron after a Sickness being on the mending-hand, for six Weeks was so averse from all Meat and Drink, that she could hardly take any thing by her Mouth; but by the advice of *Auberius*, Broth of Flesh, with the yelks of Eggs, was injected in at her Fundament twice every day; and by the help of these Clysters she was so nourished, that being with Child she carried her fetus to the appointed time, and was happily brought to Bed of it. In the year 1660. *Mr. Bourgeois of Neuenburg*, the Governour of the Alms-house, being ill of a Quinsey, and swallowing nothing at all, was by the same means sustained for eight days, till the way for Meat and Drink was opened again.

VIII. In all Clysters 'tis useful to consider mens wont, inasmuch as some go not once to Stool in two or three days or longer; others unless they go once or twice a day, their Head and Belly seem to be loaded: Wherefore according as one uses to go to Stool, or somewhat oftener, must Clysters be given, unless something hinder; as in Children, in whom the retentive Faculty is very weak, and therefore they endure not Clysters often; as neither can Men that have the same Faculty weak, or *Mercatus* the expulsive quick and sensible.

IX. One in a Barber's Shop complains of the fear of an approaching Disease; the Barber offers him his help, and prepares a Clyster, and injects it cold: The poor Man tells him that he's sensible of coldness in his Guts, and intreats him that he will give him an hot Clyster instead of it: the Barber does confidently tell him, that 'twas all one whether 'twas hot or cold: but the event shewed the difference; for being oppressed with a great weakness of his Faculties, he could not void the Clyster again either of himself, nor when provoked by another hot Clyster; and the next day being overcome with an eternal coldness, he died.

S. Pauli Qua-
dripartit. Bo-
tan. p. 461.

Barthol.
Cent. 1.
Obs. 76.

X. *Adr. Spigelius* boasted that he had found by experience, that Inflammations of the Hypochondres in the Intestines may be digested the same way by Clysters, as external Tumours and Inflammations by Fomentations.

XI. *Vallesius* (5. *Epid.* p. 487.) says, that *Eudemus* of *Larissa* had the flux of the Hemorrhoids begin upon Purgations, because formerly for other Distempers he had used frequent Purgations, or Clysters, or Suppositories: to let us know, that many do deservedly shun their use, for fear of the Hemorrhoids.

River. Pract.
l. 1. c. 11.

XII. *Laudanum Opiatum* used even in Clysters procures Sleep powerfully enough, yea more safely than when given by the Mouth.

Frid. Hofm.
m. m. l. 1.
c. 10.

XIII. *Sennertus* (l. 1. *Pract.* in the Chapter of the *Phrense*) advises, in the greatest weakness of the faculties to mix Opiats with Clysters, when they cannot conveniently be taken in at the Mouth: But Correctives are not to be omitted, such as are the Oyls of Dill, Chamomel, Roses.

Flemp. in
Institur.

XIV. The quantity of the matter of the Clyster is commonly prescribed to fifteen or eighteen ounces, which is often too much, when the Intestines are filled with feces or wind, or the Patient is short of stature, or a little punch-belly; for then seven or eight ounces are enough: but when we inject them for absterision, as in the Dysentery, they may be given in a larger quantity.

Claudinus.

XV. Let Clysters be injected actually cold into those that are prone to part with them again presently.

XVI. In great weakness of the Intestines let the decoctions for Clysters be of broth.

Capivaccius.

XVII. Clysters that should work strongly must consist of a little broth and a good quantity of Electuaries, for so they are longer kept.

Wolf Gabel.
ch. v. Cent. 1.
cur. Annot.
62.

XVIII. If Clysters be too long retained, which often happens, inject three or four ounces of crude Honey with flesh-broth, or one Glass of Urine, and it will certainly bring out with it the former Clyster. ¶ If the Pipe or nozzle of the Syringe by which Clysters are injected, be put up the anus, and the Air be attracted by drawing out the stopple, by this means the wind is not only drawn out, but Clysters that have been too long retained are furthered in their excretion.

Platerus.

XIX. According to *Rufus* in *Oribasius* (8. collig.) the quantity ought always to be larger in Women: for Women are dull, of slow motion and cold: besides they have naturally larger Bellies for the containing of the feces.

Pharm.
Dogm. c. 17.

XX. *Quercetan* commands that there should be ready prepared in the Shops a Carminative oyl of *Coloquintida* that is Purgative; this oyl, he says, may be kept long; the Dose of it is one ounce, or two, accordingly as there is need of its stronger or weaker working, being mixed with fat broth: It would be a Sovereign Remedy against all soporiferous Diseases, Apoplexy, Lethargy, &c. Of the aforesaid *Coloquintida* boiled with lenitive oyls, as oyl of Earth-worms, Linseed, Lilies, Mistletoe-berries and Chamomel, one may make a compound lenitive Purgative oyl after the manner of the aforesaid Carminative Purgative oyl, which being mixed with the broth of a Sheeps Head, is an excellent Remedy against all pains: for the oyl does wonderfully temperate the acrimonious and poisonous quality of the *Coloquintida*, so that being thus prepared it is not hurtful or prejudicial at all to the Guts, to whose coats otherwise, though it be the most finely powdered and made up into Troches, a little is always wont to stick: which inconvenience we prevent by this preparation, and the mixture of oyls with its essence and propriety, and thus it becomes a Remedy less dangerous than *diaphanicon* it self, or *benedicta laxativa*. It will be useful in divers sorts of Clysters, and will exert notable effects with good success, especially in af-

fwaging the intolerable Colick pains that arise for the most part from glassie Phlegm that sticks to the Intestines, in which, Purgings lenitives given alone are found altogether ineffectual and invalid. The description of the first mentioned oyl is this: Take of the dried Herbs of Rue, Calamint, Organy, Penny-royal, of each an handful, of the Seeds of wild Carrot, Cummin, Fennil, Bayberries, of each an ounce, of oyl Olive two pounds, red wine one pound: boil them till the wine be consumed: Into the oyl thus prepared put two ounces of the pulp of *Coloquintida*; digest them by the fire in *Balneo Mariae* for twelve hours, then let them boil two hours, until the oyl have drawn out all the vertue of the *Coloquintida*, then press it and strain it.

XXI. In Clysters there are only two Purgers, *Scammony* and *Coloquintida*; other things are added for the more commodious evacuation: Oyl, that the way may be slippery; fat gemma, for the fusion of the excrements; Carminatives, for wind.

Walaeus
Meth. Med.

XXII. That Clysters may be substituted for Purging Medicines is clear from *Galen* (2. s. loc.) where in the pain of the Head, or a stroak or blow upon it, and in a fluxion upon the Eyes he proposes a strong Purgation, whether it be by giving a Purgative by the Mouth, or by strong Clysters. If two or three ounces of *agua Benedicta* be added, they purge very powerfully: They will become Purgatory also, if one dissolve in them two drachms of some Pills.

XXIII. Strong Purgatives, as Troches of *Agarick*, *Scammony*, *Coloquintida*, when they are boiled in Clysters, must be tied in a rag, lest the thicker matter of them stick to the Intestines and cause griping. Mercurials and Antimonials, seeing they easily settle, and send not forth their thicker parts in boiling, may be boiled without being so tied.

Fr. Hofmanni
m. m. p. 128.

XXIV. We must note in all flatulent Distempers, that Clysters are not to be given all at once, but first of all about a third part; and a while after give the remainder, for so the Patient will retain it the better.

Idem l. 1.
cap. 16.

XXV. To mix oyl or any fat thing with Clysters that are to purge the Guts, as is common, is contrary to all reason, seeing the vertue of irritating Medicines and the faculty of feeling are both of them dulled by nothing more than by oleous Medicines: Wherefore we must abstain from these while we endeavour to excite the sense only, unless when both causes concur to Costiveness; for then it is necessary to use both mixt together, namely such as may soften the excrements, and also others that may irritate the faculty. But when the faculty is dulled by any viscid Humour, and the clearness of sense is lost, so that the Patient is not at all sensible of the weight or acrimony of the Humours, it will be expedient at such time to use those Clysters first that absterge or cleanse, and afterwards those that irritate, that when the impediment is removed, the faculty may be rouzed from Sleep as it were and arise to motion.

Mercat. de
Indicar. Med.
l. 1. c. 3.

XXVI. We must know that fat Clysters, which are called common, made of Mallows, Marsh-Mallows, Beet, Prunes, Linseed, Fenugreek, are not profitable for all, though they are found useful to the most for procuring the usual stools; for by their nidour Womens Wombs are wont to be disturbed: their ill smell also affects some mens Heads, and in others the Mouth of their Stomach; in some likewise it corrupts the Spirits and Humours: hence it came to pass that the Ancients were content with Wine mingled with Honey and with Oyl only, that the stench and unprofitable burthen of Medicines might be avoided; for a thicker substance is not so fit to wash out the feces as what is more liquid.

Mercat. de
Pract. Med.
lib. 1. c. 3.
Auger. rer.
rer. castigat.
cap. 24.

XXVII. Those things that powerfully discuss, often cause pains through the wrong using of them: for if the flatuous Spirit be dense and thick, and the matter

matter much or more dense than can be conquered by Carminative Medicines, rather more *flatus* are generated by them, and those that were there before are made more thin: and therefore it comes to pass that the distended and pained part is more stretched by the new propagation and attenuation of the *flatus*. Wherefore I think it more adviseable to mix with Carminatives, those things which have a vertue to mollifie the pained parts, that they may be the easlier distended: so that I like not the use of those things at the beginning which are called duscussory, until the Disease be increased, the matter being become thinner and the *flatus* dissolved.

Idem.
Moeblus in
Institut. Fr.
Hofman. in
Meth. Med.
ex Galeno
14. m. m.
c. 7.

Rondelet.

XXVIII. Tears are dangerous in Clysters; as *Sagapenum*, &c. because of their clamminess by reason whereof they stick and cannot be repelled.

Viſtor. Trin-
cavel. l. 1.
Comp. Med.
c. 20.

XXIX. White Sugar or brown (which detergeth more) is added to the Clysters called common: But this unless it be boiled a little in the broth or decoction, being turn'd into *flatus* causeth gripes.

XXX. Whether is Salt to be put in Clysters? In Fevers the use of Salt mixt with an absterging decoction is more fitly omitted, especially when Solvents are added; for without Salt they stay longer and are reduced better into act in the Intestins: for Salt is only good in those that cannot endure a Clyster should stay long; or where we would stimulate and irritate the expulsive faculty, if it be dulled.

Zacut. Pr.
Hist. p. 546.

XXXI. I have sometimes observed, that although Fenugreek-seed be indifferently commended to either Sex to loosen a cative Belly, or to ease gripes, being used in Clysters; yet some women are offended with its smell, and especially those that are subject to fits of the Mother: wherefore for the most part I refrain from it in prescribing those Clysters that are appointed for that Sex.

S. Pauli
Quadrup.
Botan. class. 3.
p. 306.

XXXII. Mercury is reckoned by some amongst Emollient herbs, which *Hofman* (following *Marc. Virgilius* and *Brassavolus*) thinks it ought not to be, but he will have it to be put in the rank of indifferent purgers. But commonly, says he, 'tis put in Emollient Clysters? True, but that it may be, though it be no Emollient, but do only help the Emollient action by absterſion: For like Beet, Colewort and such like, it has something nitrous whereby it stimulates the Belly: Hence *Cartes* observes that the leaves of Mercury will do the same thing as the leaves of *Senna*; and hence also it is that Clysters of *mel Mercuriale* have a notable vertue to provoke to stool: therefore 'tis better to use that Honey than the dry leaves.

Lib. 2. de
Medic. offic.
cap. 147.

S. Pauli Qua-
dr. Bot.
p. 398.

XXXIII. In making decoctions of Emollient and cooling Herbs, we must see that they be newly gathered. Two years ago upon taking a Clyster in a Fever, whose decoction was made of herbs gathered the day before, I had presently a great pain arise at my Stomach, which was followed by a swooning: Of which I could gather no other reason, than the nidour and stench (ascending up my Guts) that arose from the Herbs that were musty and half rotten.

S. Pauli Qua-
dr. Bot.
p. 398.

XXXIV. As to the manner of composition, it is to be noted that there is no need of any curious composition, seeing the too great variety of Roots, Leaves, Seeds, Flowers and Fruits, to which afterwards oyl and other things are added, makes the Clysters have a bad smell, and so by their nidour they disturb Womens Wombs, and affect also Mens heads and the Mouth of their Stomach, whence at this day we see the most famous Physicians do often profitably prepare Clysters of one Plant or a few Seeds.

Sennert. In-
stit. l. 5.
Part 3. Sect.
3. c. 24.

XXXV. When Purgers do not their office, Practitioners inject a Clyster, neither rightly nor safely, says *Oribasius*; for the Guts being distended

with the Purge, and the Humours rushing thither, the Remedy is forbid entertainment: wherefore, by his advice, it will be better to put up a suppository, made of Honey with half a drachm of Salt, or however let the Clyster be but very little in quantity.

Heurn. m. m.
1. 2. c. 21.

XXXVI. It is almost incredible how effectual Clysters made of the oil of sweet Almonds are against the Colick and *Pareſis*: Yea when strong and irritating Clysters have been given in vain after the Belly has remained obstructed for five or six days, I have often commanded when people have been delirious in the acutest Fevers, to administer nine ounces of that oyl alone in a Clyster, whereby the hard *faeces* being softened and evacuated, the Belly has sometimes been rendred so quick afterwards as if they had drunk Hellebore or other the strongest Purge, yea it has still continued loose, otherwise than it use to do after other Clysters, which (not being fatty) are injected in acute and Malignant Fevers, in all which I think we should obtain from Purgers.

S. Pauli Qua-
drup. Botan.
p. 14.

XXXVII. That Tabaco has a vertue to purge upwards and downwards those experience that against their will swallow its smoake. If the same smoak be puff'd into a glass full of Beer or Wine, it does the same: Hence an ingenious person instead of the decoction for Clysters learned to put this smoak up the fundament, and happily procured stools in all distempers where a Clyster is needful. Let two Pipes be filled with Tabaco after the usual manner, then light them and turn the Mouths of their Heads one upon the other; then put the smaller end of one up the Fundament, and holding the smaller end of the other in your Mouth you may blow the Smoak up into the Guts. By which artifice any one may give himself a Clyster, and there needs not such a potter with Decoctions, seeing by this Smoak Nature seems to be solicited to excretion happily and readily. The Smoaks of other powders also might be injected in this manner according to the necessity of the urgent Diseases in the Guts. *T. Barthol. Cent. 6. Hist. 66.* where also a more convenient instrument is described. A like instrument may be made for the Womb, for modest Maids and Women, that they may themselves, as there is occasion, either purge, alter or strengthen it. *Idem ibid.*

XXXVIII. It is to be remembered here, that Clysters are not wont to have that good success in old Men they have in young, as *Sydenham* (*tract. de febr.*) has observed, on the account that their Nerves being weaker may easily be hurt and resolved by Emollients: Yet that holds not universally, if we regard also the strengthening of the Nerves, and prescribe them not oftner than is fitting.

Wedel. de
comp. med.
ext. p. 90.

XXXIX. Medicines fetched from the Class of Minerals, do far exceed other Purgers that come into the composition of Clysters; whether we would assuage pains raised from cold causes, crudities, *flatus*, Mucilaginous, Tartareous and Gritty Humours; or would expel Worms, draw forth the stinking filthiness and putrefaction of the Humours; or would more strongly purge all Humours, but yet without too much heating, such as is wont to be caused by *Hierk Logadii* or *Pachii*, *diacolocynthis*, *benedicta laxativa* and others of this kind, which most use to rouse up their Patients in comatose and sleepy symptoms and affections, whereas the exceeding heat of these Medicines rather strengthens the Disease, and fills and wearies the Brain with a greater quantity of Vapours rather than lessens them by scattering of them. This happens not in those other Remedies, which being wholly destitute of those manifest and hurtful qualities do put forth rather formal and spiritual effects than material. The Medicine which I speak of is *crocus metallorum*. If any be fearful of these Medicines,

dicines, because he has not tryed them nor understands them, and therefore do not approve of giving them by the Mouth; yet I think he cannot be so stupid, as to be against the giving of them in Clysters, especially if he be acquainted with the very notable effects, which they perform gently indeed, but most sovereignly, and in the mean while give no disturbance, either by the ingrateful smell of oyls, or by any thing else, as for the most part happens in the vulgar Clysters. Their price is also less: for half a drachm or at most a drachm of the before-mentioned Remedy is enough, which is to be steeped in four or five ounces of some convenient Water or Wine for a night or longer; and so mix the clear infusion with some broth in a sufficient quantity to make a Clyster. If you please, you may keep the same infusion (made in Wine or Water) ready prepared, and so make it in a large quantity, increasing the dose of each: This you may keep very long and make use of it, always observing the aforesaid dose. Instead of *crocus metallorum*, though not with so great emolument, you may use *Antimony vitrificated*; which yet being infused, strained and given in Clysters is less prejudicial than *diaphanicon*, and is far more profitable and effectual than that. Experience and daily use recommend such kinds of Clysters. See *Riverii prax. c. de Apopl.* and others.

Querc. Ph.
Dog. c. 17.

Cosmeticks.

The Contents.

The use of them is hurtful. I.

An internal Cosmetick of the infusion of Vipers. II.

Respect is to be had to the inner parts. III.

Some are convenient for the fat and others for the lean. IV.

Mercurial Cosmeticks are hurtful. V.

I. Cosmeticks corrupt the Skin, 'tis better to use none: but those Cosmeticks that have sublimite in them are pestiferous and deadly; for they cause a stinking Breath, blackness and falling of the Teeth, Deafness, Stupidity, Palsie, Falling-sickness, and Apoplexy.

II. Some English Women of the better rank (as I have it from the faithful relation of some English Men) drink Wine wherein Vipers have been drowned, for an internal Cosmetick to procure pulchritude of Body and beautifulness of the countenance and all the Skin, without any detriment to their health.

III. If the Skin be stained through the fault of some internal part, as the Stomach, Liver, Spleen, those parts, are to be strengthened, the Concoction of the Stomach is to be helped, the fordid recrements of the Skin are to be deterged by Baths or Stupes.

IV. A Stupe is more convenient for Fat People whose Skin is foul; but a Bath is fitter for the lean or squalid, whether from the Sun, or from labour, or want of virtuales. There is the same reason of Topicks: for, convenient for these latter are oyls or ointments, or some water that has a deterging faculty, 1. the Decoction of spelted Barley, or the infusion of white Bread to wash the face withal; 2. ointments, the oyl of sweet Almonds, &c. For the former, viz. such whose faces look fat and moist, stupes and baths that deterge and dry much are more profitable. *Lignum f.* excels others in a deterging faculty, which will be a proper Remedy for the lean also, if Lilly roots, and white and fat Figs be added in its decoction, &c.

D. Panarol.
fac. 1. p.
211.

Zwelf
Pharm. Aug.
claf. 12.

Rondelet.

V. Women that are more curious and pretend to the greatest Skill in the Cosmetick Art, are hardly content with any cutaneous Remedies but Mercurial; wherefore the following water is commended for all turpitudes of the face, and is sold at a great rate by Empiricks. Take of Mercury sublimated an ounce, being powdered put it in a Tin Vessel with three pints of Spring Water; Let them stand for twenty four hours, stirring them now and then with a wooden stutula till all the liquor look blackish, which yet being strained through brown paper will look clear: let the face be gently wet with this, by a rag or feather, once in a day or two. This Medicin helps notably any cutaneous turpitude whatsoever; namely inasmuch as it rids away the Humours that are settled within the pores and little holes be they never so small, it dissolves the inveterate and stubborn combinations of the Salts or Sulphurs, and all the Skin to which it is applied, has its passages restored by it to their due shape, and it self is rendered of a good colour. Wherefore it is not only profitable for clearing the face of stains or spots, but also for taking away the pustules and redness thereof, and other affections thereof of the nature of *Erysipelas*. Moreover it sometimes happens that most parts of the face, but especially the Nose and fore-Head, are thick beset with black specks, as if they had been burned therein with Gun-powder; which yet proceeds from hence, that the sweating holes are sometimes filled with a thick black Humour, and sometimes with little worms having black Heads (which little animals being squeez'd out of the pores and held up to the Sun, may be discerned to live and move themselves) and when the Skin is so affected, no washings or besmearings do any good except Mercurial: Yet there is often present a too malignant sting under this Honey; for the particles of the Quick-silver being applied to the Face together with the Salts whereby they are divided into those particles and sharpened, do rid and drive out of the pores the offending and defiling matter; but they follow it being driven inwards, and by and by do easily insinuate themselves into the Blood and nervous liquor, (whose crases they hurt) and by their means they often imprint afterwards an indeleble virulency upon the Brain, and sometimes upon the *precordia* and other parts. Hence it is a frequent observation that Women or Men that have long and much used the Mercurial Cosmetick, are subject to the Vertigo, Cramps or Convulsions, and Palsies, and that their Teeth are black and sometimes drop out. See § I.

Willis oper.
pott. sect. 3.
cap. 6.

Cupping-Glasses.

The Contents.

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The application of them upon the Liver is sometimes dangerous.

V.

They ought not to be applied to the Head when it is full.

VI.

The wonderful efficacy of dry Cupping-glasses upon the Thighs for revulsion. VII.

The application of them is hurtful if the Blood be very serous.

VIII.

By what means they may attract also the thicker Blood. IX.

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Whether they are to be covered with a linnen Cloth, that they may attract the more strongly. X.

Cupping-glasses that draw by the sucking of the Mouth. XI. Whether dry Cupping-glasses be of any use to call out Malignity. XII.

The black Spots left under the Skin are no tokens of Malignity. XIII.

I. THE use of Cupping-glasses with scarification is Evacuatory, Revulsory, Derivatory and Attractory. It is reputed by some to be a general Evacuator, supplying the place of Venesection, and serving to lessen the Plethora of the whole: But I can hardly admit it this office, but with good reason do rather assent to *Celsus*, who says (l. 2.) Cupping-glasses are of use, when there is a fault, not in the whole Body, but in some particular part, which part it is convenient to exhaust for the confirmation of health. Thus he. And then, A Cupping-glass is to be applied to no other part but to that which is to be Remedied. *Gal. l. de hirud. &c.* Cupping-glasses are profitable after the Body is evacuated; we use them not in the Plethorick. The Egyptians use not Cupping-glasses with Scarification for taking away a Plethora in the beginnings of Diseases; for they cannot supply the place of Venesection, as appears, 1. Because the small extremities of the Veins and Arteries of the scarified part, do not satisfie an universal evacuation; and 2. They evacuate only the thinner Blood, the thicker being left behind.

Rolinc. meth.
gen. & part.
p. 393.

II. Vulgar Physicians now a days fearing the use of Cupping-glasses, and never using to apply them but in those that are ready to dye, and that can by no means be recalled, have made that Remedy infamous, whereas *Hippocrates* used them frequently, and perhaps as often as Venesection, as also in most pains, and in others in whom evacuation is only designed, as in those who have had falls. But what is it they are so much afraid of? Left, say they, Humours should be drawn from all about into that part upon which 'tis fixed. But *Hippocrates* speaking of one that had a pain in his Hip, says, that upon fastning a Cupping-glass upon the Hip, the pain fell down into his Leg and he grew better: So far is it from drawing always to the part it is fastened upon. What therefore, did the Cupping-glass thrust down the matter in this Man? No indeed, for how could it? but drawing it from the depth to the skin and digesting it, it gave Nature an opportunity to thrust it down the more easily. Is it a small matter for the Cupping-glass to draw from the part affected, that lies deep, to the Skin, unless it call the Humours thither from all about? Cannot the part that was preternaturally distended, be evacuated, but as much must be received from otherwhere? Cannot the parts subside? Certainly they are greatly deceived; for there is no present Remedy in all great pains, nor any that will sooner cause the matter to depart out of the part affected into some more ignoble.

Vallef. l. 4.
Epid.

Idem lib. 6.
lib. 2. Epid.

Hippoc. (as we may see *lib. de med.*) used many, and those differing in shape according to the diversity of pains: namely for pains that are situated deep, to make a great and strong attraction there is need of the frait-mouthed; but of wider, for pains that are spread as it were through the Skin. As for my own part, 'tis seldom but I use Cupping-glasses, either with Scarification or without, when any parts are pained, and the pain yields not to general evacuation as they call it.

III. We must fasten the Cupping-glass after such evacuation of the whole Body has preceded, as the Disease requires and the Patient can endure: for we must neither come in the first place to any Remedy that resolves powerfully; nor yet must we tarry so long till the whole Body be emptied and juiceless, as most Physicians do at this day,

who think no evacuation almost enough in order to the evacuation by the Cupping-glass; but we must consider how urgent the passion of the part is: And as we administer resolving Medicines to the Body that is begun to be evacuated, and stay not away till the evacuation be ended; so when the passion is urgent Cupping-glasses are often to be interposed amongst evacuations, that the Disease which cannot tarry for the whole evacuation, seeing 'tis needful to divide it, may be Remedied by using Venesection and Cupping-glasses by turns. For where the Body is not very full, or it is not the first invasion of the fluxion, we need not suspect that the traction will be so great, that the fluxion should be moved or encreased from the whole Body upon the part affected; for it will be enough if it be drawn from the internal seat of the pain to the Skin. For to fasten them upon the Hypochondres, is not to fasten them upon the Liver Spleen; nor is the fastning of them upon the Hypogastrium, the fastning of them upon the Bladder or Womb; nor if one fix them upon the Loins, does he fix them upon the Kidneys: for there are the Muscles and many other things between them: But if after Cupping-glasses have been applied, the pain and affluxion shall return again, what will hinder to derive again from thence by letting Blood? For in other cures, when we have some way satisfised the urgency, we return to the legitimate indications that arise from the causes.

IV. We must note, that if upon removing the Cupping-glass, even although the Skin be cut, yet the place still appear lifted up and tumid, we must apply it again: otherwise it might come to pass, which sometimes happens, that the Blood drawn and driven thither might cause an Inflammation, and sometimes beget a Gangrene.

Rub. in c. 11.
l. 2. Celsi.

V. The Story of a Courtier in *Hildanus* makes it plain, that the application of a Cupping glass upon the region of the Liver is dangerous: This Man bleeding much at the Nose, the Surgeon fastened Cupping-glasses upon the region of his Liver, whereupon it inflam'd, and was very hardly Remedied.

l. 2. de morb.
& l. 2. de affect.

VI. *Hippocrates* in the Quinsie fastens them upon the second vertebra of the Neck, then upon the Head being first shaved, and near the Ear on either side: In the Inflammation of the *Wolta* he applies them behind on the shaved Head with Scarification: In pains of the Ears, he fastens them behind the Ears, without incision, only that they may draw: All which must be done seasonably and with reason; for being applied to the Head unseasonably, they breed Lethargies, and stupors of the Body and mind, and if the Patient escape these, he falls into some continued Disease of the Head, as is delivered by *Aetius* (*Serm. 3. c. 20.*) and *Rubeus* in c. 11. l. 2. *Celsi*. An aged Woman labouring under an inveterate Head-ach and Dimness of sight, having while her Body was foul and unpurged, caused Cupping glasses to be applied, was shortly after taken with a Palsie of her Arms; however she recovered, but with much ado. A Potter being disempered in like manner, upon the application of them fell into a Palsie, but could never be cured.

Fab. Hilda-
nus Cent. 5.
obs. 71.

VII. The Wife of N. having her Terms stopt for three Months, was reckoned by all to be with Child; betwixt whiles crying out she complained of a great pain about her *Precordia* and a great difficulty of Breathing, many things being administered against Hysterical fits for Fourteen dayes. These proving little, I commanded the *Saphena* of both Ankles to be opened to revel the Blood from the oppressed *Precordia*; but the attraction of it towards the upper Parts was so great, that there flow'd not above an ounce by this passage that was opened in the Feet. Wherefore the Surgeon fixed six dry Cupping-glasses on each Thigh, and

and being so fasten'd he drew them from the uppermost part of the Thigh down to the Knee; in the evening he repeated the application and traction of them so often, till the inside of her Thighs appeared very red through the Blood that was drawn thither. After the use of these her pains presently seem'd more mild, the following night they decreased by degrees, and the next morning her Courses flowing they vanished wholly.

Soult. Ch.
Obf. 85.

VIII. When the Blood is not fibrous enough, 'tis very dangerous to draw it out by Cupping-glasses with scarification. *Prevotius* saw a Girl who upon the fastning of Cupping-glasses in that case, died of a pertinacious flux of Blood which could not be Remedied by Art.

Rhod. Cent.
3. Obf. 69.

IX. That the thick Blood may also flow out, according to *Avicen's* direction (*c. de ventosis*) we must bathe and stay an hour. Wherefore in Practice this is to be observed, that the part where the Cupping glass is to be applied, be fomented with a Sponge dipt in sweet warm water, that the Blood may be attenuated and fused.

Capivac.
pract. l. 6.
c. 16.

X. Cupping-glasses attract for the avoidance of a vacuum, on this manner: A piece of Tow (of Flax or Hemp) is kindled in the cavity of the Cupping-glass, then the Mouth of the glass is fasten'd upon the Body, and so the flame is smother'd and goes out: by and by the contained air, that was much rarefied by the flame, grows more dense, and takes up lesser room; therefore, lest there should be a vacuum, the Skin must needs be lifted up, to fill up that space that before was possess'd by the rarefied air: whence Cupping-glasses draw by so much the more, by how much the ambient air is the colder: And those mistake who cover them with Linen Clothes, &c. for the colder the ambient air is, the more is the included air condensed, and the more it is condensed, the less space it possesses, and so the Skin that is comprehended by the mouth of the glass is raised the higher. This reason is ingenious indeed, but experience refutes it: Those that have stood by when Surgeons have applied Cupping-glasses do testify, that if the ambient air be cold, they draw nothing forth, yea scarce raise the Skin at all: but on the contrary if the Patient sit by an hot fire, or be diligently covered with hot cloaths, they draw effectually & speedily.

Plemp. in
Indic.

XI. Of Cupping-glasses drawing by the sucking of the Mouth, see Book I. under the title of the *Atrophy*.

XII. Reason perswades and daily experience demonstrates that Cupping glasses, not only with scarification, but the dry also, supply the place of Venesection, for derivation and revulsion, when the weakness of the strength or faculties do not permit this latter. Dry Cupping-glasses, perform this without any loss of Spirits, for the Blood that is revelled or derived by them from any part, is only drawn for a little while into the dilated Vessels under the Cupping-glass, and as soon as the Glass is removed, it will return again by and by into the larger Veins: now in this case the Glass chiefly benefits, if it be removed, after the part, which is a receiving the fluxion, or has already receiv'd it, being freed from the influx of Humours, has restored it self to a better state: this, I say, is manifest. But it is not so certain that any thing can be called out by the application of dry Cupping-glasses: For whether you place the Patient in a warm Bed covering him well, or give him a strong Diaphoretick, you shall thereby procure sweat, but by such Remedies you shall not presently draw the Morbifick matter from the Patient along with the sweat, however not considerably, unless it be concocted and separated from the Blood, or be nearly disposed for separation. Although those things which being taken inwardly provoke sweat, have a faculty also to separate those things that are foreign, from the Blood; yet they produce

not such an effect being given at any time or after any manner, but only when given in convenient circumstances, without which they hurt more than benefit: That the like happens about Cupping-glasses I think can hardly be doubted; when *fluxus* afflic't, dry Cupping glasses being applied bring sudden benefit; for seeing *fluxus* are freed from the mixture of other Humours, they are not hindered from passing out through the open pores of the parts that lie under the Cupping-glasses: but such things as are mixt with the Blood, although together with it they fill the Blood-vessels expanded under the Cupping-glasses, yet they forsake not their companion in whose embraces they are straitly detained, but as soon as the Glasses are removed they return with the Blood into the larger vessels, unless through the vehemence of the attraction, the capillary vessels being opened, and the very substance of the Flesh gaping, they stick with the Blood in the *rimulae* of the Flesh or Skin, their return into the vessels being stop't after that those upon taking off the glasses have restored themselves to their former situation, and then the extravasated Humour concreting, it stains the Skin with black or livid spots (of which in the following section.) If therefore the malignant particles be exactly mixed with the Blood, and be not easily separable from it, dry Cupping-glasses are applied in vain: If they be separated, or be nearly disposed to separation, in my opinion 'tis better to administer diaphoreticks inwardly, and outwardly to use gentle frictions: By the former Remedy the poisonous infection is not cleared from any particular portion of the Blood, but from its whole mass; and by the latter not any particle of the Skin, but the whole habit of the Body is prepared to yield a ready exit to the poison: both of them benefit without any trouble to the Patient, or loss of his strength. But with a portion of the Blood to call out a small part of the poisonous infection to certain places, that it may return back again with the Blood into the Vessels, I see not what benefit can accrew from hence with respect to the Malignity, whose expulsion is here chiefly sought: But I am only certain that the Patient is vexed with an incommodious situation of his body and a distraction of his flesh and skin, especially when many Cupping-glasses are applied at once. But when the matter that partakes of Malignity is a separating from the Blood, or already separated, the ways by which it is cast forth are very rightly loosened, whether such relaxation be by Cupping-glasses, or by anointings, &c. The Serum, in which the poison is chiefly lodged, is always fitly cast forth by Vesicatories, not only because these open the pores of the Skin and of the glands that lie next under it; but because by their volatile Salt they attempt a separation of the Serum from the Blood. Some will object, That in malignant Fevers the Patient has presently manifest relief upon the application of dry Cupping-glasses? I answer, that that often happens, not in respect of the Malignity that is called out, but by reason of the revulsion of the Humours from the inner parts, the oppression whereof is suspended for a time, and the Patient gets leisure to recruit himself and to recollect his Spirits, that he may thence forward more strongly bear up against the fluxion: and that Remedy is chiefly convenient, when the weakness of the faculties hindreth revulsion or derivation by venesection: and on this account Cupping-glasses are called the Deputies of Venesection, especially when they are applied with scarification. Cupping-glasses may be also profitable on other accounts, though they draw none of the poisonous infection away.

Franc. Bayle
probl. Med.
15.

XII. If dry Cupping-glasses be applied with a large flame, there must needs be a strong attraction, as they commonly speak, or rather a

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compul-

compulsion of the Humours because of the Cupping-glasses, and the flesh must be raised into a great Tumour under the Glasses, and thereupon the Skin must be vehemently distended, and the capillary Vessels spread through it distracted, and their Mouths loosened, their Sides broken, the Blood contained in them poured out, and when it is out of the Vessels, contract a blackness; seeing in a warm place, by the contact of the Air, by little and little it coagulates: These things happen not only to the Sick, but to the most Healthful. Therefore the blackish Spots that are bred of the Blood poured out in this manner under the Skin, do not denote the malignity, but the strong drawing of the Glasses, by using a great flame. Nevertheless those Spots are more easily raised in some, through the thinness of their Blood, the softness of their Vessels, the laxity of the Parts, &c. of which the Physician ought to judge from the different Circumstances.

Idem Probl.
14.

The Diet of Sick Persons in general.

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Respect is to be had to the foregoing life and custom of the Sick. XLI.

The benefits of Sleep procured by Art. XLII.

I. **T**HERE are two chief Scopes upon which the Eyes of the Physician are fixed, The Faculty, and the Disease; the former requires to be preserved, the latter to be removed: the Faculty requires Meat, by which it self is preserved, but the Disease encreased; the Disease requires Remedies, whereby the Faculty is weakened. But because the Business cannot be done without both, a Diet is to be found out with Method, whereby the Patient may hold out till the crisis of the Disease. Now it is clear that the more Meat a man needs, the less can he bear the subtraction of it: And that one man stands more in need of Meat than another, happens either from the Disease, or from the Man, or from Externals: And in the Disease it self, either from its Constitution, or its Species: From the Constitution, because the longer it will be, the thicker Diet is necessary, namely that it may suffice for many days. Therefore he that would prescribe a right Diet to his Patients, must learn the Art of foreknowing the constitution of every Disease; and then must know also, that the longer the Disease is like to be, he must be the more indulgent from the beginning: Otherwise than improvident Physicians do, who having no foresight of future things, and observing that in acute Diseases the Faculty is sooner and greater affected, and urged with more frequent Symptoms, being afraid of the Faculty, begin presently to cram their Patients: and on the contrary, in the beginning of Chronical Distempers being affrighted with no Symptoms, and seeing but a small dissolution of the Faculties, they dare too much extenuate the Diet: And afterwards, when they see the Diseases continue longer than they had reckoned upon, fearing the length of Abstinence, they are forced to encrease the Diet; first indeed by the subtraction suffering the Faculties to be debilitated before the time, and then by the addition hindring the concoction of the Humours. Whereas they should do on the contrary; I mean, in the beginning of the Disease they should allow a fuller Diet, but when concoction is proceeding and the Disease passing to a crisis, they should withdraw it by degrees, with the same swiftness whereby the duration of the Disease it self is contracted: For those parts of the Disease wherein the concoctions do more employ Nature, do more forbid a full Diet: Therefore because of the alterations of the Humours the beginnings of Diseases (when Nature has not yet entered upon concoction) permit to give more meat than their increasings, and these than their heights. Nor must we act as we have said, only because of the concoction of the Humours, but in respect to the Faculty it self, because this is in so much the greater danger by subtracting Viſuals in the beginning than afterwards, by how much the more remains to be transacted. The Faculty therefore alone requires that Meat should be granted: but as for its quantity, that is shewn not only by the Faculty, but also by the time of the Disease; which indicates it, not indeed for it self, as begging, but for the Faculty, and permitting. From the Species of the Disease also there is some indication of the quantity of Meat; for seeing Meat is given for the Faculties sake, Diseases do by so much require the more Viſuals to be allowed, by how much the stronger in their own nature they require the Faculty to be, that they may be overcome: And the less the Parts affected can endure Meat, the less they permit it to be given. Therefore in those Diseases whose matter is within the Thorax, we must sometimes be more free in our allowance, than when the Natural instruments are filled with Excrements,

crements, because in those not only the Natural but the Animal Faculties also are defective: If therefore you let those who are so affected, languish too much through the withdrawing of Vi-
 ctuals, it will come to pass that though the matter be concocted, yet they will die, only by not being able to cough it up. For this cause 'tis clear that more Victuals should be allowed these; but for those that labour under Diseases of the Hypochondres and other Parts, less: And amongst these the least is to be given to those whose Distemper lies in their Stomach, because seeing the Part affected it self is to work the first and greatest change of the Meat, and to struggle with it when it is most crude, it is clear that it will be the most hurt by Meat. These are the Indications from the Disease; In the Man himself there are two things which indicate the quantity, his Nature and Custom: For those who have much natural heat, the same need much Food, and are soon brought low by a little; and therefore in Sickness the less is to be withdrawn from them: but from the contrary, more. Now those are soon brought low by a small allowance, in whom the Faculty of altering Meat is strong; because seeing that Faculty is natural, and cannot cease when there is matter present to act upon, when but a little Vi-
 ctuals is allowed, it parches the Excrements which must needs be in some quantity in the Publick Work-houses, by which by and by the substance of the Body is parched and melted, and the Meat it self being so little, instead of being concocted, is corrupted and vitiated. The disposition of the substance in Children requires also much Meat. Likewise great respect is to be had to the Custom, nor is that ever to be changed in sickness or in health, but by little and little, and when a man is unemployed. Which the generality of Physicians not considering, allow the same Diet to all their Patients. External causes are also to be considered, as of Time, to which the difference of Countreys is like: Thus the Winter and Spring make Mens bellies the hotter, &c.

II. The variation of the quantity of Meat is necessary, both in regard of the alteration of the Disease, and also of the different strength of the Faculty. For 'tis consonant to reason, that less should then be allowed when the Disease is greater: So in the beginnings of Diseases, when the Patients are however the more moderate, more Vi-
 ctuals may be allowed; but in the state, because of the vehemence of the Symptoms, 'tis clear that nothing should be given. Yet 'tis doubtful, whether we may always in the beginning of any Disease, be the more liberal in our allowance? I Answer, That it is not always true, but while the Body is affected with no other morbid apparatus: for if the first region be foul, or there be crudity, a thinner manner of Diet is better, till the crudity be overcome and spent by the sparseness of Diet; and Celsus's counsel holds, The beginnings of Diseases do in the first place require hunger and thirst. Let Hippocrates be consulted, Lib. 1. de viſ. Acut. 1. 32, 42. and 45. For both of them suppose that never any lived so moderately and sparingly, but that he takes somewhat more than is fitting, so that there remains something that is crude or excrementous: in respect whereof in the beginning of a Disease we must use sparseness of Diet. We must also take heed of the beginnings of all Inflammations, especially of the principal Parts, and of those which have a Fluxion joyned with them, wherein we must allow less in the beginning, and more when the Mouth begins to fill with Phlegm: for you erre very much if in the beginning you allow much Meat, as we find when the Humours are turgent, which suddenly pass into a Phrenſie, whence the Disease will perhaps last longer than the strength through the abstinence in the beginning can hold out.

III. Whether is it better to offend in too thin or too full a Diet? I distinguish (with Mercurialis) betwixt the Dose of Meat in respect of its virtue, and that in respect of its bulk; and answer, If one offend in a thin Diet in respect of its virtue, that is certainly a greater fault than if he offended in a fuller, because the Faculties being once cast down through want of sustenance, can hardly be recruited: But with respect to the bulk, 'tis far worse to erre in a full Diet than in a spare, because more Vi-
 ctuals being thrown in than is fitting makes the Disease, as Hippocrates writes; for there are more Excrements bred; whence there is not only afforded food for Putrefaction, but the Native heat is also dulled and the preternatural increased: Moreover Nature, which ought to be wholly employed in concocting the morbid Humours, is wholly called off from that work to the Meat to the very great prejudice of the Patients. ¶ Seeing we cannot always come to so clear an understanding of the Faculty, as from thence to prescribe a just form of Diet; and Patients use otherwise to offend in this matter, it is queried, Whether be the greater error, that, when too full a Diet is allowed; or that, when one too spare? But Hippocrates resolves this, saying, That the errors which are in any manner committed in a thin Diet, are worse than if they had been in a little too full: For many things may happen in the Patient beyond expectation, as sudden watchings and too great evacuations, Passions of the Mind, whereby the strength of the Patient may be cast down, so that he cannot hold out to the state of the Disease with this form of Diet: wherefore when the state of the Disease is approaching, 'tis then necessary to change the Diet, and to allow it a little fuller, which yet is very inconvenient, because through a fuller Diet, Nature is called off from her fight against the Morbid matter to the concoction of the Aliment. From all which 'tis clear, that 'tis safer to allow a too full than too spare a Diet; though, as to the quantity, we must rather look to subtract. Which being observed, the two places in Hippocrates which seem to contradict one the other, may be easily reconciled: the one is 2. de viſ. rat. Acut. where he says, We must much less intend the addition of Meats, but it is often altogether expedient to subtract: And the other 1 Aph. 5. Sick Persons offend in a thin Diet, whereby they come to be more hurt, inasmuch as any error here is wont to be worse than in a little too full a Diet. For in the former place Hippocrates speaks of the quantity, in which the same form of Diet being observed it is always better for us to be more sparing: but in the latter he speaks of the form of Diet, which if it be thinner than it should be, it brings greater inconveniences than if it were a little too full.

IV. Some have thought that it is the same thing in Acute Diseases to give a little of some more solid and stronger Meat, as to give such a quantity of some thinner Spoon meat, as yields so much nourishment as the little solid Meat that is taken in its room. But their opinion is refuted by Hippocrates, (Lib. de Veter. Medic. v. 91.) Whosoever, says he, take dry Meat, Hasty-pudding or Bread, although but very little, they are ten times more, and more manifestly hurt, than if they had used Spoon meat, for no other reason, but because of the strength of the Vi-
 ctuals in respect to the Disease, and in respect to him for whom it is convenient to sup, but not to eat. Here Hippocrates manifestly affirms, that when we eat something that is stronger than the condition of the Disease, and the nature of the Patient require, it always does harm; though in a small quantity it does less harm than in a greater. Which I would have common Practisers to note, who use so readily to allow both Bread and Flesh, and other solid food in acute Diseases.

V. Whether is Meat therefore to be detraſted, because there is a necessity to evacuate the Body? I answer, Though Meats are taken to recruit the Blood that is contained in the Veins, yet the Blood

Greg. Hoff.
 Exercit. de
 Febr. iv.
 qu. 6.

1. Aph. 5.

monſtr. lib.
 1. de viſ. rat.
 Acut. 1. 32, 42, 45.

Senner.
 Instit. lib. 5.
 p. 2. Sect. 3.
 c. 3.

Martian. in
 dict. loc.

Vallef. m. m.
 l. 1. c. 6.

Mercat. de
 Praſid. Me-
 dic. lib. 1.
 c. 1.

Idem.
 ibid.

that is stored up in the Veins takes not away the necessity of eating afresh; otherwise Athletick Persons, &c. should need no Meat, but might be long preserved without eating, which they cannot: Their Bodies namely, for retaining their strength, need some profitable juyce for the nourishment of the solid Parts, and fresh Meat and Drink for the recruit of the Spirits, otherwise they faint in their Mind and all their Faculties, though they are full of Humours. 'Tis not therefore because evacuation is needful, that there is no need of Meat; nay perhaps sometimes there will be need of grosser Meat, that the Faculty may sustain the Disease and the Evacuation. It would be strange if you should bid your Patient eat nothing because he must be let Blood; for by this means he will come to languish before so much is evacuated as is expedient. What is, that therefore which Hippocrates says, (*Lib. 1. de Vi&. Acut. l. 19.*) *Whoever use Barley-broths in these Diseases, let them not permit their Vessels to be emptied one day, as I may say, but let them use them without intermission, unless it be convenient to intermit them either for a Purge or for a Clyster.* Certainly it is not convenient, that that meat which is fitting for the Disease, should be let alone even for one day, unless some other thing intervene, which may cause an intermission; as if at the hour the Patient was to Dine, there unexpectedly happen a rigor or chillness through the beginning of another invasion of the Disease, it is manifest that Dinner is to be omitted for that time: So if, when as the Patient used daily to eat at Noon, some certain day he takes a Purge, he must be dieted on that day, not as he was wont, but as the Purgation indicates. The same thing may happen when a Clyster is to be used, namely when the former meat is not descended, the disposition requireth that the Clyster be injected and meat intermitted.

Valles comm.
in præd. lo-
cum, pag. 19.

VI. When the Crisis is at hand, Hippocrates withdraws Spoon-meat, lest Nature be diverted from her work and the Crisis hindered. But because by a Crisis Hippocrates commonly understands any solution of the Disease, and not only that which is made to health suddenly and with some sensible evacuation, Spoon-meat is not to be withdrawn before every Crisis, but only in that which happens by the means of some sensible evacuation, which he intimates a little after, *if the Patient be disturbed*: For when there happens a disturbance upon the Diseases proceeding to its highest vigour, then there is to be expected a Crisis with a sensible evacuation, according to *Aphor. 13. 2.* From which opinion of Hippocrates there may be easily gathered a reason why in Diseases of the Breast 'tis convenient to encrease Spoon-meat about the Crisis, namely because in those Diseases there is no Crisis that has a disturbance preceding it, and indicating a sudden Crisis with sensible evacuation, seeing the matter is brought out by little and little by spitting, which Spoon-meat will not hinder, yea it will further it, both by moistening the Parts of the Breast, and also by strengthening the Faculty.

Martian.
comm. in v.
138. V. Acut.

VII. There are different opinions whether the reason or manner of Diet should proceed by *incrassating*, or *extenuating*. I shall make appear which is the truest by two Conclusions: The first is, When the Disease is known, is simple, and the Faculty strong, the indication being taken from the Disease, if that keep the matter for one critical evacuation, the reason or manner of Diet ought to proceed by extenuating: The reason is, because all the times fall in together; for the Disease, when it is in the beginning, state, augment, as to the alteration of the matter, is in the beginning as to its Essence and as to its Symptoms. Seeing therefore the Disease and Symptoms are less in the beginning, and greater in the augment, and yet more vehement in the state, the indication being taken from the Disease it self, we must feed more fully in

the beginning, more sparingly in the augment, and the most thinly of all in the state. The second Conclusion is, When the Disease keeps not the matter from the beginning, but that begins to be Purged out by degrees, the manner of Diet ought not to proceed by extenuating, but by incrassating: The reason is, when the Disease is in the augment, or in the state as to the alteration of the matter, the Patient hath now escaped the danger, and the Disease hath had a *Crisis*, because it is in its declination as to its essence and as to its Symptoms: Therefore the Patient is to be dieted more fully then than before. But, How can the Disease be in its augment, or state as to the alteration of the matter, and not as to its Essence and Symptoms, seeing the coction that is made in the Veins partakes of Putrefaction, and is like to that which happens in Inflammations, according to *Galen, 1. de Diff. febr. 5.* therefore if the Putrefaction be increased, the Disease with the Symptoms will be increased also? I answer, In the internal cause, which begins, cherishes and increases the Disease, two things are to be considered, the *quality* and *quantity*; The first is acrimony, heat, or an evil quality arising from Putrefaction and Corruption; the second is either the same and equal, or is greater and lesser. Quality alone cannot bring on a determinate Distemper without a certain quantity, and the greater this is, the greater is its effect, because there is no Agent so prevalent that can impress its effect without a certain quantity; hence a spark of fire warms not, much less burns. From this cause although in the augment and state the quality of the cause be strengthened as to the alteration of the matter, yet seeing the quantity is diminished, it cannot make the Disease greater than it was before through the defect of the quantity. You will object 1. The more the Disease recurs, the fuller Diet we must use, because the Faculty being made weaker by the Disease and the Remedies, seems the more to be recruited. I answer, 'Tis true that the Faculty is weakened in the Progress of the Disease; yet if the Diet be prescribed as it ought, then in a Disease which terminates in health the Faculty is always superiour to the Disease; for, that the Disease may not encrease with greatness of Symptoms, we permit the Faculties to be a little dissolved, because we must not provide only for the Faculty, but also for the Disease. You will object 2. In the beginning of the Disease there is greater plenty of crude and rebellious Humour, therefore a thinner Diet is then convenient, that Nature may not be diverted from the concoction of the morbidick matter that is crude and untamed. I answer, in the augment and state the Faculty is more hindered than in the beginning, for the heat and acrimony of the Humour, now boiling and rarefied, irritates more, and therefore Nature being provoked uses greater endeavour than in the beginning, and therefore is not to be diverted from that work. You will object 3. from *Aph. 1. 1. 1.* In the beginning of a Fit the Patient ought to abstain from Meat, and therefore he is to be more sparingly dieted in the beginning of the Disease also, if there be the same reason of general and particular times. I answer, That there is great disparity between them, for in the general or universal beginning the Disease and Symptoms are always less, but in the particular greater, for it is the worst time of all the Period, and therefore the more unfit for giving of Meat. Obj. 4. In an unknown Disease, according to *Avicenna*, we must shorten or thin the Diet; but the Disease is less known in the beginning. Answ. The Conclusion is to be understood of a known Disease, for when it is not known, a due regiment cannot be prescribed: but if it be known in the beginning we must feed more freely, and afterwards more sparingly. Obj. 5. Hippocrates 1. de Vi&. Acut. l. 21. where he treats of the Pleurisie and acute Diseases, says, Neither

Ex. Zacut.
P. M. B. 178
m. 349
p. 16.

Zacut. Pr.
Hist. 1. 144

Neither much nor thick Spoon-meat is to be offered in the beginning: And Text. 23. If the Mouth, says he, wax moist, and there appear an evident and perfect concoction, the quantity of the Spoon-meat is to be encreased. *Ans.* Hippocrates discourseth there of a moist Pleurisie, in which the matter is purged out by degrees, in which case the Diet should be fuller and fuller. If you say that every Pleurisie does not terminate in a gradual evacuation, seeing it often ends Critically, as in *Anaxion, tertio Epid. 3. 79.* who was twice cured by a Critical Sweat. *Ans.* 1. *Anaxion* labour'd under a double Disease, one from the Humour contained in the Veins, (and from thence the Fever sprang) of which he was cured by the Sweat; the other from the Humour settled in the *Pleura*, whose Crisis was by spitting. 2. In the Pleurisie and all internal Inflammations, a most thin Diet is convenient in the beginning, that the Fluxion may be stopped which will give an encrease to the Inflammation; for the Parts through Abstinence becoming needy, they retain their Humours, and suffer them not to flow together to the Part affected: But when there begins to be an Expurgation, a fuller Diet must be prescribed, that the Patient may cough up easily, and his animal Faculty, which it needs, may be strengthened.

Ex Zacut.
P. M. H. pag.
m. 349.
Hist. 50.

VIII. Whether is it worse to offend in Meat or in Drink? *Celsus* answers, l. 1. c. 2. *Often if there be any intemperance in the case, 'tis worse in Drinking than in Eating.* Reason confirms it, 1. Because the immoderateness of Drink is commonly greater, seeing drinking does much burthen the Belly. 2. Because Drinking is more opposite to the innate heat, and by its plenty the heat is sooner extinguish'd than by Meat, like fire. 3. Much Drink is not concoctible, and it is hardly superable by Nature, yea it is an hindrance why the Aliments are not concocted, because it is mixed with them, and makes them slippery before concoction: Hence it comes to pass that the more men abstain from Drink, the more healthful they live, and less liable to Diseases: but through immoderate moisture a man is greatly subject to Diseases from Putrefaction.

Zacut. Pr.
Hist. p. 544.

IX. *Galen* (*Aphor. 17. 1.*) intending to cure corruption of Humours, the Faculties being weak, has these words: *If the Faculties of the Sick Person be weak, and that disposition which is in the Body, be from corruption, or defect of Humours, we will give to such a little sustenance: and often: little indeed, because the weakness of the Faculties cannot sustain the whole multitude of the Aliment together; but often, because the Disposition needs many things, inasmuch as the defect requires addition; and the corruption contemperance.* By which words he affirms that corruption of Humours requires many Meats, and that it may be corrected and cured by them. This Doctrine seems to be contrary to Hippocrates, (*Aph. 10. 2.*) *The more you nourish foul Bodies, the more you hurt them:* And 7 *Aph. 67.* *If any give Meat to one in a Fever, 'tis Strength indeed to the healthful, but a Disease to the sick.* Solve the contradiction by saying, When the Faculty languishes, Dieting may be proposed two ways, either with evacuation, or without it: this latter way it is not granted according to *Aph. 10. Sect. 2.* But with evacuation frequent eating is prescribed as profitable and necessary, for the corruption needs many things, that is, addition of Meats, because instead of the vicious that ought to be evacuated, that which is profitable ought often to be put into its place by allowing Aliment; which curing of the vicious Humour Physicians call *Epicrasis*. Or say, That the Cure by *Epicrasis* may also be effected by Aliments, and refrigerating and moistening Medicines, that can dull the edge of the acrimonious and biting Humours: which seeing they are temperate (called by the Greeks *Eicrasica*) do blunt the acrimony of the Humours, drive away Putrefaction, are rightly concocted, recruit the Faculties and are in no wise

corrupted, especially if their quantity be lessened; otherwise they increase it; for *Galen* (2. *Simpl. c. 12, 13 and 14.*) teacheth, that when acrimonious Humours abound, temperate Aliments do not mitigate their biting, but they are rather corrupted: yet on the contrary, if their abundance be evacuated, they contemperate them, because they are not then corrupted by them, seeing they are the more prevailing.

Zacut. Med.
Princ. lib. 2.
Hist. 91.

X. Hippocrates (2. *de Vill. Acut. t. 24 & 25.*) saith, that those who are wont to make two Meals aday, if they dine not, are made weak and infirm, and are affected with many Symptoms, even when in a state of Health: Hence he concludes, *a majori*, If such things come to pass in the healthful through the unaccustomed omission of a Meal in the middle of the day, what shall we think must happen to sick Persons? Physicians therefore erre, who after they have starv'd the Patient for many dayes, do suddenly again recruit him, against the Aphorism, *To empty or to fill much and suddenly; &c.* is dangerous.

Vallecomm.
in cit. loc.
p. 69.

XI. The Prudence of the Ancients is to be consider'd about the Diet of debilitated Persons, who gave a little thin food to the newly Purged, or to such as had otherwise been exhausted of their own accord: So Hippocrates 5. *Epid.* durst give to one taken with a cholera, nothing but thin Gruel made of Flowr and Water. Otherwise than the vulgar Physicians do, who allow a great deal of gross food with Wine; as if that which hath been spent in many dayes, they would restore in one.

Vallecomm.
in cit. loc.
p. 469.

XII. It happened that a Countrey-fellow that was taken with a very acute Fever, being brought to the Hospital could hardly be cured by D. *Gisbertus* with any Remedies: At length when he was even ready to dye, he askt him whether he desir'd any thing, what kind of Diet he had used formerly? He answer'd that he wholly loath'd that Meat and Drink, Syrups, &c. and that his Bed was too soft: that he had used to feed upon Onions, Cheese, Flesh of hard concoction; and to sleep in the open Air with his Cloaths on. Then D. *Gisbertus* let him lye one Night in Straw, and permitted him to have an Onion and Salt and cold Water; believing that this would presently dispatch him out of the way, whereas he found him next day standing by the fire. ¶ In the year 1668. a Gentleman at Geneva was ill of an acute Fever, who had lately left the Wars; his name was *Debulet*: He had no Sleep for eight Nights, nor could I procure it by any Remedies. His Wife tells me that her Husband desired to lie one Night in Straw, thinking that perhaps he might sleep there: I would not deny his request; knowing how great the strength of Custom is: So we put Straw under him, upon which he was hardly well laid, but he fell fast asleep, and shortly after recover'd his Health.

Soleand.
Sect. 5.
conf. 15.
Sect. 16.

XIII. Although a more plentiful Diet is to be allowed in the beginning of a Disease, according to the precept of Hippocrates 1. *Aph. 8.* *When the Disease shall be in its vigour, the thinnest Diet is to be used;* both because the Disease is less and does more permit food, and also because the faculties are stronger; and less intent upon the concoction of the Morbifick cause: yet sometimes a thin Diet is profitable in the beginning, and a more plentiful in the state. 1. *Galen* (12. *Metb. 6.*) when the Humours that raised the Fever are coming to concoction, grants flesh, which he permitted not before. 2. In 1. *Acut. ult.* in the beginning he orders Barley-cream, and then Barley and all. 3. *Celsus* 2. 16. says, that the beginnings of Diseases require hunger and thirst. 4. Hippocrates, *Galen* and *Avicen* affirm, that if the Patient be to be bled, or purged, or to have some pain allayed, no meat is to be given till these things be done, and they are to be done in the beginning

of

of almost every acute Disease. (1. *Apb.* 24. and 2. *Apb.* 24.) 5. When the Disease does so afflict with plenitude, that there is fear it should choak the Patient presently, then he is to be Dieted sparingly in the beginning. 6. In Wounds and Ulcers, according to *Hippocrates* (*lib. de ulceribus*) and in Inflammations; for in the beginning of these there is need of greater attenuation than in the progress of the Disease; because in these we endeavour to restrain the defluxion, for which purpose great abstinence is very profitable, otherwise there is danger of a Phrensie, Convulsion, &c. 7. If in the augment of the Disease, or in the very state there happen any Symptom that destroys the faculties, we must presently endeavour to strengthen them by a fuller Diet, and yet as soon as the Symptom is allayed, the reason of the state of the Disease admonishes to return to the former thinner Diet. 8. In Fevers that are fierce and vigorous in the beginning, and about and in the crisis are lessened, (of which *Hippocr.* 1. *Epid.* 3. 1.) then in the beginning we must Diet more sparingly to lessen the cause. 9. In Malignant Pestilential Fevers, wherein the faculties being wasted by the poisonous Air are near extinction, a fuller Diet is to be allowed in the state: For Patients that have eaten and drunk stoutly in the Plague, have escaped from it, says *Galen* 3. *Epid.* 3. 77. On this account in colliquating Fevers, in which the faculties are greatly enfeebled, he allows a fuller Diet in the state, 12. *Metb.* 3. lest they fail; for the hurt that springs from a full Diet in the state is less to be regarded, than death which is certainly at hand from the total loss of strength and the resolution of the whole habit of the Body. 10. In the state we must sometimes Diet more fully, when there is fear of arefaction or falling into an Hætick Fever: for when the primigenial moisture of the Parts is by little and little and insensibly digested by the febrile and roasting heat, then we must use in the state a moistening Diet, and that full, which may correct or prevent the future driness. 11. The Physicians of our dayes order a thinner Diet in the beginning of Diseases, because it greatly conduces to the concoction of the remainders of the half concocted aliment which sticks in the Stomach and first ways; for then for this reason 'tis good for a day or two to use a thinner Diet, and then if debility of the faculties follow, to use a thicker; yet with this consideration, that as soon as the faculties are recruited by this means, the Diet be lessened again even till the state; Wherein although there be need of an attenuating Diet, yet if through preceding evacuations and the vehemence of Symptoms, the faculties be more languishing, then being driven by necessity we allow a fuller Diet in the state.

Zacut. Pr.
Hist. p. 537.

XIV. Although when Chylification is hurt, the other functions that follow that first, will become vitious also; yet we must not deny the whilst that it sometimes happens, that the sick not only receive no prejudice thereby, but rather that their lost Health is restored by the vicious Chylification itself. But as often as that happens, it happens either by chance, or by art, because from aliments that are not so very laudable, and which one would hardly allow to the well, there is prepared such a chyle in the Stomach as serves instead of a Medicine to correct and amend the vicious Humours in the Body of the Sick. Hence it is that they are sometimes cured by eating some food that is hurtful in it self, and yet Medicinal to them, and is potently, or impotently craved by I know not what instinct now and then.

Fr. Sylv. Append. Tract.
3. § 42. &c.

XV. Seeing the Physician cannot always obtain of his Patient to abstain wholly from hurtful food, he must diligently endeavour to be well acquainted with Medicines that may remedy the hurts arising therefrom. Thus, for example, if any Pati-

ent's belly used to be extended upon the taking of certain aliments, as suppose Milk and the like, and the Physician know that such tension depends on flatus raised from the Milk, things that disperse wind shall withal be prescribed the Patient; and of the number of those let the Physician select such as he has learned by experience serve for discharging flatus raised from Milk.

From this Foundation sprang the Art of seasoning meat, but in tract of time, as most other things are wont, it degenerated into abuse. For the various seasoning of Meats seems to be invented not so much for the sake of correcting aliments that are vicious in some regards, as for the sake of divers relishes grateful to the taste and apt to excite Men to gluttony. But when aliments are seasoned according to the prescript of the Medical art, not a few harms that are otherwise to be expected from them, are shunn'd and prevented.

Idem tract.
5. § 222.

XVI. As many as after the manner of the Ancients commit the greatest part of the cure of their Patients to a Chimerical or I know not what Nature, and then, excepting the Diet, which they order after a fort, are only Spectators of the fight, which they Romance to be raised between Nature and the Disease, and so are judges of the Victory, which one while is on the Diseases side, and another on Natures, such Persons indeed offend in defect: But as many as, besides Diet which consists in the six non-natural things duly administered, do moreover think that Medicines are to be prescribed by understanding Physicians, at least in most Diseases, which may correct or cast out all that which is apprehended to be besides Nature in the Sick, these would have Physicians to be not only Spectators, but Actors also. And surely that Physician seems not so well to satisfy his own office and the expectation of the Sick, who performs only one part of his office, which consists in a due ordering of Diet, while he neglects the two others that consist in the right direction of Surgery and Pharmacy. For I think a case cannot easily happen wherein there is no place for prescribing some Medicines. Indeed I deny not that the Sick may be cured, nay that they are often truly cured, though no Medicines were prescribed them by Physicians; but none shall easily persuade me, that the same are cured so soon, so safely, so easily and pleasantly, as if convenient Remedies had been administered to them. For one may have often observed such Sick Persons as have been helped by Diet only, that they have been longer ill, have often suffered dangerous relapses, or have not escaped from their Maladies but with difficulty and irksomeness; when on the contrary those to whom fit Remedies were administered, have been cured both shortly, and safely, and pleasantly.

Idem tract.
8. § 199. &c.

XVII. On the contrary vicious Humours are often amended, not only by the vertue of Medicines, seeing often none are taken, but by the help of Diet alone, namely such as is apt to procure that emendation; not indeed such as is temperate, and is owing to healthful Persons, but such as departs from temperateness and mediocrity; yet so that it be somewhat contrary to the fault of any offending Humour, and therefore convenient for correcting and tempering of it; whether such Diet be prescribed by the Physician, or, which happens oftener, chosen and used by chance by the Patient himself: for in furnishing of it chance oftener has place than reason.

And indeed I deservedly wonder that from Diet so often changed by chance, there should be so great changes not only for the worse, but also for the better; and yet that the true reasons and causes of such mutations are not observed by Physicians: seeing Patients do far more easily suffer themselves to be governed by Diet than by Medicines. Which Diet if it be prescribed them, and be

Idem tract.
10. § 245.

be not morose and disdainful, (yea often fanciful enough) but easie, grateful and taken from experience, by the help thereof very many benefits redound to sick and recovering Persons.

XVIII. Know that in the time of pain all meat whatsoever is not without fault, especially that which easily waxeth sour, or turns into fume; for on both accounts it encreaseth the pain. For Ptisan or Barly-broth, which is received by Hippocrates as the most convenient food for those that are sick of an acute Fever, is rejected by him in the vehemency of pain, 1. de viſit. Acut. Except, sayes he, you ease the pain either by procuring stools, or bleeding, accordingly as either is requisite, and shall give Ptisan to those who are so Distemper'd, you shall drive him head long to Death. Concerning other meats in the time of pain he sayes, These things seize on him, not only if he use ptisan unseasonably, but much more if he eat or drink any thing that is more inconvenient than ptisan. You will object, that Hippocrates has there forbidden ptisan, as also other Meats, not account of pain, but of the Inflammation of the membrane that cloaths the Ribs, which he was speaking of, and which he called pain. It is so indeed, and yet that stands good which we have said, That in the time of vehement pain all meat whatsoever, even the lightest, is not without fault, yea is very prejudicial. For pain is one of those things which do most of all cast down the vigour of the Body, so that neither does the Stomach concoct aright, nor the Liver or Veins turn it aright into Blood: neither moreover is the distribution, apposition, expulsion of excrements, or any of the natural actions performed duly because of the pain hurting the actions, and especially for that Nature being intent upon that which grieves her, sends the Blood and Spirits, which are the common instrument for all actions, to the place of the pain: whence it comes to pass that the parts appointed for concoction suffer a want of them; which is a cause that the Meat is ill concocted in the Stomach, Liver and Veins, and easily acquires thence a foreign or preternatural heat, & at length becomes a cause of the encrease of the pain. When therefore the parts appointed for concoction suffer a want of the influent heat, and the object on which it is to work, remains on that account liable to a foreign heat (Nature being intent upon another work) Physicians do advisedly to let Blood: in a great pain, that as much as Nature fails of her wonted care, so much the Blood may be lessened; Nor is Blood to be let only, that we may preserve the Humour that is in the Liver and Veins safe from a preternatural heat, but we advise provokers to vomit for the meat that is in the Stomach: It would be mad advice therefore to administer meat at that time, wherein the emptying of it out of the Stomach is a Remedy for the pain. But seeing there are many differences of pain, so that some invade and remit by turns, some torment continually, and of these some have got such a vehemence as to bring the Patient into watchings, and others into inquietudes, the same course of diet is not to be taken in them all. Whosoever are disquieted with continual pains and watchings, must abstain from all Meat and Drink; for the Disease to which a continual inquietation is joined, is terminated within four dayes, for its vehemence, and therefore a total abstinence is convenient. Those pains indeed are the most vehement, that bring the Patients into inquietude. Hence Galen l. 1. Those that are ill of pains, are often without a pulse, and fall into faintings, and can be moved no manner of way: The like things to these happen from the acuteness of a Disease: But there are some whose faculty is not affected hereby, but through an evacuation of the vessels made some manner of way. Whether therefore it be through an excretion manifest to sense, or by perspiration, or through fasting, these indeed need nourishment and refreshment quickly: But

on the contrary if it be through pain, or acuteness of the Disease, they stand more need of some evacuation than addition; yea he that gives food to these, does them the greatest mischief. From Galen's words a strong argument is taken, that no food is to be given to one labouring under a vehement pain, with strength of the faculties, seeing he writes that it does much mischief to those who are made very weak through pain, so that they are without pulse, and are taken with swooning. In those pains that are next to the most vehement the Patients can keep one posture of lying, but can take no sleep; wherefore such a Diet is to be granted to these as we said was convenient for those Diseases that terminate on the seventh day; for continual watchings are one of the three Symptomes that terminate a Disease on the 7th day. For those therefore who through pain endure continual watchings, such sustenance as is to be drunk is convenient: So Hippocrates: But we must use Drink, if there be any pain, vinegar and Honey (or oxymel) hot in the Winter and cold in the Summer; but if there be much thirst, Water and Honey, and Water alone. In which place Hippocrates hath defined the form of Diet from the reason of the two Symptomes, from pain and much thirst; whence gather, that when there is any pain, we must use something to drink for our food, and that there is no place for such things as we use to sup.

XIX. Hippocrates sayes, Ptisan (or Barley-broth) seems to me to be rightly preferred before all food made of Bread-corn in these acute Diseases; and indeed I commend those who prefer it: for its lentor (or clammy glibness) is smooth and continued, and pleasant, slippery and indifferently moist, &c. Note that Hippocrates does not say that Ptisan is better than all other food, but that it is deservedly preferred before all other food made of Bread-corn: Therefore every Physician will prescribe to his Patients that are ill of Fevers rather Ptisan of Barley than of Wheat or any pulse: yet it is not therefore worse to give them Hen or Chicken broth, boiling such things therein as are proper for the Fever, viz. cooling Diureticks, &c. And not this only, but there are other things that are every whit as good, as potcht Eggs, and small Fish that live in clear stony Rivers: for the Diet of Feverish Persons is not defined by any certain matter, but that it be thin and moist, easie of concoction and of good juice. The most ancient, that were not far removed from the first Men, lived more upon pulse, fruits and herbs, and were not so accustomed to Flesh; and therefore Physicians used rather Pisans in acute Diseases than Flesh: But now Men are such eaters of Flesh, that from the indication of custom, Physicians have deservedly turned to thin flesh and omitted Pisans. ¶ The Marrow or crumb of a white loaf boil'd in broth, is a frequent dish in our dayes: whether it ought to be had in the number of meats, or Spoon-meat, is not clear: for Hippocrates (lib. de Affet.) hath placed it among meats, when he commands it should not be given to Persons in Fevers: We give it to such instead of Spoon-meat; and if such crumb by long boiling in broth be reduced to smoothness, so as it may be sup't, it is placed in the rank of Spoon-meats, and may be given to Persons in Fevers: And this is it which we commonly use, and vulgarly call Pap. If the said crumb be only wet in Broth, it ought to be ranked amongst meats, in which form Hippocrates will not give it to Feverish Persons. ¶ The many benefits that are ascribed to Ptisan, agree to this; yet that heat which it acquires from the ferment seemeth to be somewhat contrary, so that upon this account it is hotter and drier: But according to some Mens opinion it is not unprofitable to wath the Bread once or twice in pure water, and then to boil it in good broth, especially that of a Chicken, which attemperates all the Humours and brings them to an equality: long boiling is to be added, which procures equality of substance

Brudus de
victu Febril.
cir. lib. 3.
c. 27.

Vallef. comm.
in l. 1. in v.
Acut.

Martiani
comm. in v.
25. l. de
Affet.

substance as to Ptisan, so to Bread; so that it becomes most easie of concoction, and most agreeable to Nature.

Foris conf.
82. cent. 9.

XX. *Ptisan* is not generally good for any unless those that are in Fevers, or that have an estuating Stomach or Hypochondres: it produceth a thick juice, especially joyned with Pine-apples; and being endued with a deterging vertue, it also hurries the meat off the Stomach sooner than is fitting.

XXI. Many things are deliver'd concerning the choice of water, and how to know which is better and which worse; Some approving most of all of *Rain-water*, as being thinnest and boiled as it were by heat; others greatly dispraising it, as partaking of all Malignant qualities, inasmuch as it is drawn out of all things, even the most hurtful and fordid. Some preferring before all other *Well* or *Conduit-water*, as being the best cleansed by their percolation through the Earth; others thinking these to be the most thick, crude and flatuous of all: and some lastly esteeming *Fountain* or *River-water* the best. I think it is consonant to the opinion of *Hippocrates* and *Galen*, and so to the truth, that *Summer Rain-water*, that descends with Thunder and Storms, is the best of all; inasmuch as this is not truly made of Vapours that are thick and that ascend with abundance of moisture, but of such as are thin and are hardly extracted by the force of the heat: but that other *Rain-water* which descends from thick and very opaque Clouds, and is foggy, is the worst of all, fordid, partaking of evil qualities, and easily putrefying. Moreover *Well* or *Conduit-water*, that is sweet, and is known to be derived from the next River or Spring, is better than River or Spring waters themselves, unless the Ground that lies betwixt the Wells, and the Rivers or Springs partake of some foreign quality: But if the *Well-water*, as it commonly does, proceed from that abyss of waters that is every where under the Earth, it is certainly the thickest and most crude. Seeing therefore the best *Rain-water* cannot be procured without too great curiosity, and *Rain-water* is seldom to be had from a River, and has that danger with it which we spoke of the ground or soil, it is better to use Spring or River water, the best that is in or near the Town we live in; especially seeing that vertue which is in the *Summer Rain-water* you may impart to *Spring-water* by boiling it, and that vertue that is in *Well* or *Conduit-water* you may impart to *River-water* by barrelling of it up: For both by barrelling up, the water is purged, and by boiling, it is moreover attenuated; but *Spring-water* cannot be kept so well as *River-water*: Yea and besides the boiling, that *Water* which flows out of Springs that are high and exposed to the Sun, that run down a steep place towards the Rising, or Noon-Sun, is wont to be more concocted and better than that which runs out of dark and foggy places towards contrary places.

Valle Comm.
in l. de vit.
Acut. p. 127.

But because one *Water* differs so much from another, *Spring* from *Spring*, *River* from *River*, and *Well* from *Well*, that many *Spring* and *River Waters* are worse than most *Well-waters*, 'twill indeed be better to try by proper Notes the very *Water* by it self, omitting its manner of breaking out of the Ground, and in every place to use that which Nature has provided the best there, whether it run along the Ground, or spring up in a *Fountain*, or be drawn out of a *Well*: That is best which is most simple and thin: you may know its simplicity, from the greatness of its want of taste, colour and smell; and its thinness, from the quickness of its growing hot or cold, as it is said in the *Aphorism*: for you will find this a better and more exact sign, than that which is taken from its weight.

XXII. *Hippocrates* adds, In acute Diseases I have no other operation to attribute to the drinking of *Water*, that is, *Water* performs nothing else for the Body than to serve for drink; and to serve for drink, is nothing else than to be a vehicle for the Aliment. You will object that it is said 6 *Epid. f. 4. Water is devouring*, that is, it stirs up an appetite to meat; and that *Galen* (*m. m.*) reports very many things of plentiful drinking of cold *Water*, namely that it extinguisheth burning Fevers, if it be taken seasonably, and by a fit Person, namely by such an one in whom there is neither crudity, nor any inward inflammation, nor weakness of any principal Part, nor too much leanness of Body: for these things are not to be remedied by drink only, but by the best Medicines. But inasmuch as it is said to be *devouring*, that belongs not to acute Diseases, but to the Diet of healthful Persons. As to what we said of its extinguishing of burning Fevers, *Hippocrates* does not deny the first vertues of *Waters*, that is, those which are in them in respect of their first qualities (for he will not gainsay that they cool and moisten) but only the second and third: for *Water* neither incides, nor cleanseth, nor doth any other thing in a Man which belongs to the second faculties; nor does it either astringe, or loosen, or draw, or repel, but as it refrigerates, and therefore it neither asswageth a Cough, nor brings up *Phlegm*, nor loosens the Belly, nor provokes *Urine*, nor does any other thing that belongs to the third faculties; nor does it draw forth sweat, or breed Milk, nor lastly is any other faculty attributed to it than to convey the aliment, and to cool and moisten, and by cooling and moistening it extinguisheth a Fever. Idem.

XXIII. But a little water, adds *Hippocrates*, if it be supt betwixt *Oxymel* (or Vinegar and Honey) and *Melioratum* (or Mead) brings up *Phlegm*, because of the change of the quality of the Drinks: That is, if he that useth *Oxymel* or Mead made with Wine, do betwixt these sup a little water sometimes, even the water will further the Coughing up; not indeed as if that were proper to the *Water*, but because seeing it is void of all faculties, it easily receives the vertues of all the things wherewith it is mingled, or which are boiled or steeped in it: When therefore it is drunk betwixt Mead and *Oxymel*, it makes an inundation, and moves the other drink and is mixed with it, and encreaseth the fulsity and therefore the Coughing up. Idem.

XXIV. *Hippocrates* in the foresaid place, sayes, that water is *Cholerick* to a *Cholerick* Nature; and therefore such as have a *Cholerick* Nature, it cannot quench their thirst, but rather irritates it. But how is *Water* *Cholerick* to any, that is so greatly contrary to *Choler*, seeing it is cold and moist? Not surely as if it self were turned into *Choler* (for so it cannot be) but because making an inundation of *Choler* it does after a fort encrease it, and causes it to redound this way and that way, like indeed as he that pours *Water* into Wine, makes there be more Wine, namely such as is dilute: Indeed nothing is more known by experience, than that by drinking water the bitterness is increased in their Mouths that abound with too much *Choler*, namely the *Choler* being diluted floats even to the Mouth; and therefore in such, thirst will be irritated by *Water*. Idem.

XXV. In the same place *Hippocrates* speaks thus of water, Neither does it quench thirst, but encreases it; for it is of a bilious Nature (as was said before) and is naught and very bad for the Hypochondres, and does greatly cast down the faculties when it enters into the vacuum, and encreaseth the Spleen and Liver when they are scorched, and it fluctuates and swims atop, for it is of a slow passage, because it is coldish and crude. That is, it is very bad for the Hypochondres, because it is very cholerick, and encreaseth the cacochymie: And if it slide into the

vacuum

vacuum that is there betwixt the Bowels and *Peritonæum*, it casts down the faculties, as in hydropical persons, and swell the Liver and Spleen when they are scorched, because it passes not through, but fluctuates there and swims atop: and those viscera swell from the water that abides in or upon them, especially when they are hot with much choler which the water increases; and it passes not through because it is cold and crude, for those things that are such, are of slow motion. For this cause it neither provokes to stool nor Urine, because it stays long; and it does some hurt on this account, because Nature is without excrements; it is *ἄσπερον*, which term some think is given it because it causes no defection, but I think it rather signifies either the Intestin that wanteth excrement, or the food of which no dung is made: here it is spoken of water, and therefore it signifies that no Dung is bred of water, and that for this reason it does some hurt. But what can the hurt be, that it is without Dung? *Galen* interprets it, that to be without Dung, is, not to cause defections, as if *Hippocrates* by these words should give a reason why it causeth not defection: but its not causing of defections is but a weak argument that it self is without Dung; for many things have more Dung, and yet cause defections less than even water, as black and thick Wine: Therefore I suppose, that as he said before that oxymel does greater harm to the Intestin when it is *ἄσπερον*, that is void, of excrements, because these fence the Intestins; so water hurts something because it is without feces, more than it would do if it bred some, for these would fence the Intestins. But *Hippocrates* will seem to affirm falsly, that it causes no defections, because many mens bellies happen to be loosened by drinking of water: but that happens not from any loosening quality that is in the water, but because by cooling and moistning it hurts the retentive faculty in the Guts.

XXVI. The ignorant vulgar suppose that all waters are to be boiled for sick persons, to make them thinner and purer; but the Nature of the thing is otherwise: for by insensible *halitus* or steams, what is thin transpires from the waters in boiling, and that which is thick remains: besides that waters are thereby rendred less grateful to the taste by a certain ineffable and musty relish. But they defend themselves with the authority of *Aristotle*, who (4. *Meteor.*) teaches, That all things wax thick by boiling except water, which because it is simple, its parts can by no means be separated by boiling, as they may in other things that consist of mixture: But I question not, but if water be long boiled, it will grow thick after a sort; for it is not altogether pure and sincere, so that with making a resolution of it by boiling, it cannot be made more sincere, and by consequence thicker, its areal and thin part, whereby it looked thinner and clearer, being resolved. For as it is made worse when it is frozen by the strength of the cold, so also by the strength of heat, which *Hippocrates* proves (1. *de aere, aqua, et locis*) where he says, that all waters from Snow and Ice are bad, because what is clear, light and sweet in them, is separated and lost: Wherefore it seems to me safer to allow to sick persons very clear, pure and long-kept water, than to make it perhaps worse by boiling. But that I may not seem to depart from the received custom, I say those only are to be boiled that have some fault in them which may be amended by boiling: Thus we observe that boiling is good for three sorts of faulty waters, 1. for the fenny and muddy, which *Galen* commands to boil, because when they grow cold, they lose their ill savour, their earthy part subsiding, which before was confused with the whole. 2. That water which displeaseth neither by its taste nor smell, but by its stay in the Stomach is grievous to it and the hypochondres; if it should

not be boiled, ought however to be heated according to *Galen's* precept, as having some fault from the mixture of corrupt air, or containing something that proceeds from an unknown cause, for that is very well put to flight by the vertue of the fire. 3. The last sort is the crude; for as we prepare many, yea most other things that are fit to eat, in like manner we change some waters also into a better Nature, by boiling: *Hippocrates* calls such untamed, as having the sun averse from them, and are taken out of wells, &c.

XXVII. Seeing *Hippocrates* (1. *de morb. mul. sect. 2.*) grants the use of Eggs to Child-bed Women when their purgations flow immoderately, it is a plain argument that they have a faculty to stay or stop, so that the purgations may be suppressed by them: Hence gather, that they are unfit in those Diseases wherein 'tis fitting that the passages of the Body should be open, and wherein the Humours are prepared for an exit: And moreover gather, that their astringent vertue is not obtained by boiling only, seeing *Hippocrates* (in the place quoted) uses rear Eggs and not hard ones for astringing: So 4. *Acut. v. 390.* he prescribes Eggs that are not hard, but betwixt hard and soft, for those who are troubled with a looseness. But the indifferent parts which an Egg consists of are to be noted; the Yelk, whether it be given raw, or roasted, or potcht, does always bridle the motion of the Humours and astringe by incrassating: but the white, whilst it is taken liquid, whether it be boiled till it become like milk, or be raw, does loosen the Belly; for by the vertue of the white, potcht Eggs do loosen the Belly in some: *Hippocrates* uses a raw one out of water in a burning Fever, (3. *de morb.*) because, as he says, it cools and loosens the Belly: Wherefore those do not well for their Patients in Fevers that throw away the white, and use only the Yelk.

XXVIII. Those who generally forbid Fish in sickness, go contrary to the Ancients, Experience and Reason. *Galen* (1. *ad Glaucon.* and 8. *m. m.*) in the cure of an exquisite Tertian and Quartan grants Fish that live in stony Rivers: Likewise (in his Book concerning meats of good and bad juice) he commends them so, that it is certain they cannot hurt sick people; he says they are grateful to the taste, breed good Humours, and that their frequent use is very safe, which he confirms also in lib. 3. *de alim.* *Hippocrates* that is more ancient than *Galen* (lib. *de Affection.*) does also very much commend Fish: the chiefest Physicians have followed these, granting them in sundry Diseases: Reason also consents; for Fish that are easie of concoction, and brittle, do not easily putrefie, nor burthen the Stomach, and by their quality resist a Fever. Some Interpreters of the Arabs say, they are good in Fevers, especially in Cholerick, by reason of their cold and moist temperament; and yet they are not good, in that they easily corrupt and putrefie: which distinction is vain, if so be good Fish and such as live in stony Rivers be chosen, for these are not so easily corrupted, but afford a laudable juice; nor do they nourish very much, but yield a thin aliment to the Body, such as is agreeable to many Diseases; In those Diseases namely wherein meat may be granted, Fish are often to be preferred before Flesh that nourishes more, is more hardly concocted, and yields a more Acrimonious juice to the Body: I mean not every sort of Fish, but the best and the well dressed, as our age knows how to dress them well: and I prefer broild Fish, with the addition of vinegar, juice of Lemon, &c. before broild or fry'd.

XXIX. That which some expect from Crab-fish, Cochles, Snails, Calves, Lung, and other parts of Animals, the more sagacious Practitioners reject; because the natural Balsam that glues the Lungs in Phthical persons, and refreshes the juiceless Body of the Hectick, is not placed in a volatil

Meat. de
Indic. Med.
lib. 1. c. 2.

Pr. Martian.
comm. in
1. c. p. 262.

Primros. de
vulgi Error.
1. 3. c. 25.
See Zacut.
Princ. Med.
histor. lib. 1.
quest. 19.

Spirit or Salt that is raised by distillation, but subfides in the bottom like earth or fixed Salt, is corrupted and becomes unprofitable. Distillations of flesh *per descensum* are to be preferred, which are fit for the recruiting the Spirits. Let a well flesht Capon be cut into pieces, throwing away the fat, Skin and extreme parts; add, if you please, Veal or Mutton cut likewise, separating all the fat from them: Cast these into a glazed pot, laying under them a wooden grid-iron, that the bottom may be empty; close the pot with a cover and lute it on with dough; boil it in *Balneo Mariae* (or a Kettle of Water) for 5 hours: three or four times a day give two or three Spoonfuls of the clear Liquor that distills out of them either alone, or in some other Broth.

XXX. Our Ancestors used to prepare *Restoratives* on this manner: They took the flesh of a Capon, rejecting the fat, and having cut it into bits, and washed it in Wine, or some Cordial Water, they mixt with it Conserves accommodated to the Distemper or part; also Powders and Waters, adding sometimes some Gold money or a Gold-chain: all which being shut in a glazed Vessel they boiled in *Balneo Mariae*, till the Leg of the Capon were boiled in the Kettle. As for example, in burning Fevers, Take of the Conserves of Violets, Bugloss and Water-Lilies of each an ounce, of the powders of *diamarg. frig.* and *de gemmis* of each two scruples, and six leaves of Gold: put them all in a glazed or glass Vessel that is carefully closed and well stopped with paste or lute, which being put in another Vessel full of water, is boiled till the Leg that was put in that other Vessel be boiled. But there is an error in this manner of composition, in that no respect is had of the Medicines; for they mix raw flesh with Cordial powders and boil them together, forgetting the theorem of him that commands, That such things as require long boiling are never to be mixed in decoctions with such as are more thin and light: For if one boil the Flesh thoroughly, the powders will be burnt; but if they would not have the Cordial and odoriferous powders to be destroyed, the flesh must needs remain raw; and therefore they will never make a good Medicine. Nor is that token of boiling enough to be received; for seeing the Leg is to be boiled a good while, because of its hard and carnos substance, the Powders will not only be spoiled by this token, but the flesh also it self will be too much boiled and dried away. And those that boil Gold-chains, dissolve nothing therefrom but the Quick silver or *fordes*. But we instead of raw flesh take that which is half boiled, or broth boiled for a quarter of an hour, and let them heat and thoroughly mingle in warm water, and then administer the strained liquor: Being thus prepared, it will neither be crude, nor roasted nor boiled too much; as in Diseases of the Breast: Take of the broth of a Capon thoroughly boil'd half a pint, of the water of bugloss and Violet Flowers of each two ounces, of the water of Maiden-hair three ounces, of the Powder of *diamarg. frig.* and *diarr. simpl.* of each two drachms, of *julv. de gemmis* one drachm, and two leaves of Gold, mix them and boil them in a double Vessel for a quarter of an hour, then strain them. &c.

Pondeler.
p. m. 988.

XXXI. It is not good to use *Emulsions* alone either for Meat or Drink. I knew two Infants that died by this means, viz. by giving them always and only all the day long *Emulsions* instead of Drink, with an intent to strengthen and nourish them. Hence I use not even in general to prescribe easily for Infants *Emulsions*, or however not to be taken in any great quantity; for Infants are endowed with a plentiful moisture, a weakly Stomach, fermentiscible and often bilious Humours bred of Milk or Meat corrupted: So also if Patients presume to use *Emulsions* alone, thereby to quench thirst, they easily fall into the other extreme; for it holds

universally, Aliments are not to be confounded with Medicines. Wedel. de
med. comp.
ext. p. 66.

XXXII. Seeing your *fructus horarii* (such as Cherries, Plums, Apricocks, &c.) are profitable to temperate the Summers heat, but are hurtful and dangerous through their easie corruption, they ought to be taken as much cooled as may be; because seeing corruption is wrought by external heat, being cooled they will continue without putrefying till they are concocted, and will temperate much more: On the contrary being hot they do not temperate at all, and easily turn into a salt Phlegm or a serous kind of Choler: whereby it comes to pass, that almost all that eat hot fruits, commonly fall into Tertians or other worse Fevers, and not a few into the *cholera morbus* (or Vomiting and Looseness:) whereas many by cooled fruits are freed from Agues, though otherwise they be occupied in Business and Exercises. All therefore, I think, will greatly commend the custom of cooling your *fructus horarii* by putting Snow to them: for if any find his Stomach offended by the coldness of the fruits, he may know for certain that he needs them not, nor must such an one be advised to eat them hot, but to eat either very little, or none at all. But it is otherwise with Drink, for many are offended by cold Drink, that nevertheless stand in need of that which is as cold as Ice: whence it is manifest that Snow is far more necessary for horary Fruits, than for Drink; though for this also it be profitable for many during the Summer and a good part of the Autumn, but at other times though it may be pleasant to some, yet it is hurtful to all. And therefore I would both begin and end the use of Snow with horary fruits, and in the mean while very much cool the fruits with it, and would have every one take as much as he needs, according to the nature both of the whole man, and also of the Belly alone, which nature is either hot or cold, dry or moist, or some mean between these, and according to the Custom and Experience that every one has of his own Body: But Drink is not alike convenient for all, but for every one his own way, consideration being made according to the same scopes, for thus many things would be profitable that most now dispraise.

Valle/comm.
in s. Epid.
p. 498.

XXXIII. As to Fruits, Avicenna pronounces generally, that they are all bad for Persons in Fevers, whom yet all the Greeks oppose. Galen (1. ad Gl.) grants such in the cure of a Tertian as are easily concocted: *Trallianus* prescribes Peaches both raw and boiled, Musk-melons and (*Melopepones* or) Cucumbers, and chides some Roman Physicians that abstained from Pompions because they bred choler, from Gal. 2. de Alim. when yet Galen says in that place, that Pompions breed the *cholera morbus* if they be eaten too plentifully: Yet he prescribes Pompions an hour before the Fit, and also orders the Patient to drink after them a good quantity of temperate Water; for much choler being thereby evacuated by Stool or Sweat, the Ague has ceased: Therefore he adds, In every hot intemperies of the Kidneys, Liver, Stomach, Head, in a Tertian Ague or continual Fever, nothing is better than a Pompion or Cucumber, which latter also he prefers before a Pompion, because it is altogether harmless. Hippocrates himself (in Lib. de Affect.) writes thus of Pompions: The Cucumber-Pompion provokes Stool and Urine, and is light; and the other Pompion does in some kind cool and allay thirst: both of them afford but a thin nourishment, and yet no harm that's worth speaking of proceeds from either. Besides, the sweetness of Musk-melons and their grateful Scent commend them: But we at this day know not what are the *Pepones*, *Melopepones* or *Cucumeres* of the Ancients, and therefore to come to our own: Our Musk-Melons, which many esteem for a dainty, for their admirable sweetness of taste and smell, are yet unwholsom; they easily putrefie in an hot Stomach, for they are very moist, as appears in that from

from a small root they grow into a great bulk; they are presently corrupted by every quality of the Air, and they alwayes lie upon the ground, whence by eating of them, putrid and serous Humours are by degrees heaped up in the Veins, whence Fevers or Agues encrease and are lengthened out, or if they be not present, they are procured, so that these are accounted the most unwholsom of all horary fruits. What some alledge of their sweetness and grateful odour, makes nothing towards their commendation; for this ought to be meant of the same kind of meat, and not of divers, for very many that are most grateful, are more pernicious than those that are less grateful. But our Cucumbers that use to be eat young and unripe, though they cannot be called wholsom, yet they ought to be reckoned less hurtful, both because they have a kind of sowness, and also because they are corrected with Vinegar and Salt; but in the plenty of so many Remedies 'tis better to abstain from them than to run the hazard. To come to other fruits; They are various, hot, cold, moist, easily corruptible, horary, acid, sweet, fresh, dry: The *hot*, when the indication is taken from a Fever, are wholly hurtful; yet in respect to the febrile cause or some Symptom, they may be granted, as *Figs* to cleanse, or if the Colick accompany: The *cold* are good with respect to a Fever, and they profit the Hectick and those that are taken with an *Ephemera* (or a Fever that lasts but for a day;) but though by cooling they may benefit in putrid Fevers, yet in regard of the putrefaction they hurt, because they are easily inflamed and boil in a hot and foul stomach, which is chiefly to be understood of the *borai*, such as Straw-berries, Mulberries, Plums, Peaches, Cherries. Now *borai* (from whence *boraxis* is derived) is the Summer, and the Fruits that are gathered in that Season cannot be kept for their great moisture, but are suddenly corrupted unless they be dried or preserv'd; and all those Fruits that the Latins call *fugaces*, are of a bad juice, and windy, and when they are corrupted, become like to Poisons: But the Fruits which may be kept, as Grapes, Almonds, Damsons dried, and Prunes may be allowed: as also all acid Fruits, as Lemons, Oranges, Pomegranats, for they temper the febrile heat, allay thirst, stir up an appetite, hinder the ascent of vapours: But yet the too great plenty of acid Fruits is to be avoided, because if one take too much of them, or unless they be temper'd by boiling, as they are wont to be when made into Syrups, they breed great Obstructions; otherwise they profit very much by cooling, inciding, resisting Putrefaction. Some also of the *borai* may be granted because they are corrected by boiling and by putting Sugar to them; from which yet if we abstain in bilious Fevers, or at least use it sparingly, it will be better, because it heats and turns it self into choler, as sweet things are wont. So in an exquisite Tertian *Avicen* commendeth sweet Pomegranats, Prunes, the Indian Melon, because it loosens, provokes Urine, allays heat, and moves sweat in some manner. Fresh Fruit also in some particulars is better than that which has been longer gathered, for some Fruits grow musty in time, as Almonds, Pine Apples; likewise these when they are long kept, become oily, and therefore are not so fit in acute Fevers, because the oily part is easily inflamed and turned into choler, and therefore in the Milk which we call Almond-milk we must have great care that the Almonds be not rancid or musty, for the fresher they are, the better. Some boil that Milk, but the raw is better than the boiled, for it cools more because of the admixture of much watriness, which is consumed by boiling, and therefore it alters less and is made thicker, and less apt to temper the febrile heat: On the contrary some Fruits are the better for being cold, as Raisins, Prunes, and all such as abound with too much moisture when they are new, and may

be reduced to a more wholsom nature by being laid up.

XXXIV. *Pot-herbs* and others are profitable in Fevers to alter, 1. Cold, as Lettuce, Endive, Spinach, in bilious Fevers; 2. Hot, as Tyme, Hyssop, Majoran in Phlegmatick; but we must not use them alone, for they have no nourishing vertue in them; or but little; they are rather Medicinal, therefore they are prescribed to be boil'd in Broths, that there may be Medicin with Aliment. The Sick therefore may not have leave to feed upon Herbs and Roots; for most of them use to be turned into a porraceous (or leaky) choler in the Stomach; and *Galen* having dispraised almost all Herbs in relation to food, seems to grant Lettuces only, as being less hurtful: Let them therefore be taken boiled with other Aliments for alteration.

XXXV. Moreover *Salads* are not disallowed of some. *Galen* (1. ad *Glaucon*, cap. 9. and 10.) grants not only Lettuces, but also Garden orach, Mallows, Sorrel: and if Vinegar be added, it will stir up the Appetite, resist Putrefaction, cut tough Humours, open Obstructions: yet but a little Oil is to be added, because it is easily inflam'd in Fevers. But Vinegar being used with Salads or other Meat, in a little quantity, cannot dry much, but rather, according to *Galen*, resists Putrefaction, stirs up Appetite, makes Victuals pass down well, colliquates and attenuates the thick; and so *Olera*, as Cabbage, Spinach, &c. with Vinegar are not so hurtful; they nourish but little, are cold and moist, excite appetite, and being boiled in Broth and prepared or dress'd with Salt and Vinegar, may be good.

XXXVI. *Galen* (in *Arte parva*) commends *Wine* as a Restorative for old Men and such as are recovering from Sickness; but so it is that Wine dries and does not moisten? I answer, that *Galen* allows of Wine of an indifferent age, such as is pure and clear in substance, namely that which is a little yellowish or whitish, smells well, and as to the taste seems neither altogether watry, nor exceeds much in any quality, whether sweetness, or acrimony, or bitterness; but such Wine as this does not dry, but moisten. This we note from this place against almost all the Moderns, who think that all Wine dries: for if the Wine described by *Galen* dried, doubtless it would be bad for Persons recovering from Sickness, and old Men, who are already too dry: therefore we say that the Wine proposed by *Galen* for taking away the dry disposition of Persons recovering from Sickness and old Men, has a faculty to moisten substantially, and is temperate as to heat, and dries not; for no temperate quality can dry or moisten, heat or cool.

XXXVII. It is observable that *Hippocrates* used *Water* for drink in a *drying Diet*, and neither Wine, nor Wine and Honey, though both of these moisten less than Water: which he did, not that he suspected Wine for any reason; for besides that he grants black racy Wine in an exulceration of the Womb, if he had suspected Wine, he should have prescribed some other Drink, and not simple Water. *Hippocrates* therefore approves of Water, inasmuch as it affords very little or no nourishment to the Body, the principal action of which nourishment is to recruit and moisten the radical moisture of the Body which is continually spent, and so it happens by accident that water dries. Add also that Drinks that nourish the Body are sooner distributed through it, and by consequent moisten it, than Water; which because, as *Hippocrates* said, it stays longer in the Hypochondres, it does not proceed so to moisten the Body, as other Drinks that are more pleasant to Nature.

XXXVIII. *Santorellus* (Lib. 26. *Antepr.* c. 8.) admires that *Avicen* has written that *Snow-water* is good, where he says (2. 1. *Doctr.* c. 16.) But *Snow* and *Water* turn'd to ice, seeing it is clean and not mixt with any other thing that

Primisof. de Febr. p. 144.

Primisof. de Febr. p. 143.

Sanfor. diti parv. c. 99.

P. Martian. comm. in v. 183. Sect. 3. l. 1. de Morb. mal.

has a bad quality, whether it be melted and Water be made of it, or other water be cooled by it by laying it on the outside of the vessels, or it self be put into water, it will be good. But the admiration will fall, if you understand Avicenna of a Morbous state, wherein if you give Water diluted with Snow, as a Medicine, you will not err.

XXXIX. Those do ill that let many enter into the Patient's Chamber, because the breaths of many People corrupt the Air. Galen (10. Meth. cap. 8.) says that a crowd of Friends heat the Chamber. On that account the Windows are to be kept open, for by shutting them the Chamber is not only heated, but seeing the Putrid steams are not ventilated with the inspiration of pure Air, the Patient falls into a worse condition. And let none object that the Skin is made dense and obstructed by the colder Air; for by the inspiration of cold Air there arises greater benefit to the Patient, than there does hurt by densifying the Skin. But though the condensation of the Skin be the cause of heat, this inconvenience may also be avoided by covering the Patient, and the cold Air being breathed in will cool the internal viscera, for nothing sooner changes the temperatures of the Humours than the Air, as Galen says 3. de humor. comment. 2. Indeed in malignant and continual Fevers there is perhaps no error greater, than to keep the Patients in close hot places, and such as are full of a crowd of People.

Sanctor.
Meth. Med.
V.E. l. 13. c. 4.
See Gal. in
m. m.

XL. To change the Patient's Linnen often seems a hainous thing to the vulgar; for they think that Sick Persons are made weaker thereby. But Hippocrates commands all things to be kept clean about the Sick, and Galen endeavours by all means to keep transpiration free, that cold Air may be breathed in and steams excluded, especially in continual Fevers, which happen for the most part through constriction of the Pores: And therefore when they are obstructed both by the sordes and Sweat, there follows a retention of the vapours and steams, whence the pre-existent Fever is increased, or a new one is kindled: on the contrary that man shall hardly fall into great Diseases whose Body has a good perspiration. In which thing (says Vallesius) vulgar Physicians offend, who will not permit their Patients either to put on a clean Shirt, or change their Sheets, or wash their Face or Hands, or to do any thing else that belongs to cleanliness, not though the Disease be long, or as if this did not encrease all Putrefaction.

Comm. in
l. 1. de vict.
Acut.

XLI. In some Diseases great respect is to be had to the Patient's manner of living, otherwise they will be very hardly cured. A cleanser of Jakes having smelt too good odours, fell Sick, and was at length cured by the smells he had been used to. Zacutus placed a Patient that liv'd by the Sea-side, in the Sand and cover'd him with it, that he might cure him. A Physician cured a Countrey-man, that others had given over, by allowing him Pulse and Rye-bread. And that the Region wherein we live makes many impressions upon us, which we must have regard to, I have observed, that as we that live upon the Land grow nauseous, and vomit in a Ship, which Symptoms cease when we are returned to our accustomed Land; so I have seen a Seaman, namely a Venetian, that endured the same Nausea by riding on Horse-back that we do on the Sea.

P. Boerhaave
Obf. 59.
cent. 3.

XLII. Sleep procured by Art gets the Physician great esteem. A certain Physician said, that the way whereby he curried favour with his Patients, was, that they might have quiet rest the Night after he was called; which he procured with the Syrup of red Poppies, which he prescribed for that Night: I my self also being delighted with this Stratagem, often please my Patients by giving them a magisterial Anodyne. But how comes it to pass that Sleep coming either of its own accord, or procured by

the use of Soporiferous Medicines, is often very offensive to the Sick, who when they awake complain of a great weariness and uneasiness, and find fault with those that wait upon them for letting them sleep so long, desiring them to waken them if perhaps they should drop asleep? I answer, that even the healthful when they sleep immoderately, are said to be soakt, because their flesh is made more moist, and the habit of their Body puff up or bloated, through the suppression of the fuliginous Excrement which ought to be digested and exhale by waking: and the same thing happens sometimes in Persons ill of Fevers: yet we must not therefore abstain either from spontaneous Sleep, into which a man falls when his Spirits are enervated with heat, or from that which is procured by Art; for all the uneasiness goes off in a little while, and the Spirits are refreshed.

Rolinc. de
febris
c. 133.

The Diet of Febricitant Persons in general.

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I. IN an Ague-fit food is not to be given, according to Hippocrates aph. 11. 1. For Nature (as Galen in comm. teacheth) by the concoction of the new aliment is called off from the concoction of the morbidick Humours: And besides, in the Fit all the Body is defiled with an impure vapour, which taints and in a great measure corrupts the meat that is newly taken. But if the Fit be so long, or the Body of the Patient so hot and dry, lean and of so thin a texture, that it is easily dissolved, and cannot hold out to the end of the fit, he must eat somewhat even in the fit it self, which will be better done in the state than at other times, although even in the beginning and augment meat may be given if necessity urge. So Galen. 10. meth. c. 5. in Agues was forced to allow victuals even in the beginning of the Fits, to such as were of an hot and dry temper, who can least indure fasting, lest they should faint away. In imitation of him Amatus Lusitanus (cur. 68. cent. 4.) gave to one in the beginning of the Fit, that vomited clean Choler, (upon

Valle. in m.
l. 1. c. 9.

See Zacut.
P.H. p. 139

R.
iver.

on which he swooned) bread soaked in water and sprinkled with Vinegar and so he hindred the foresaid Symptoms. That hurt which may happen from giving of meat in such like cases, is obviated by giving some Veal or Chicken broth cold; (in France they call it Veal or Chicken water, because it has a middle consistence betwixt mere water and broth thoroughly boiled) for by this means the acrimony of the heat is attemperated, and the imminent driness is hindered; and yet Nature is not called off from her office of concocting the Morbifick matter, which she more easily conquers when the acrimony of the Humours is mitigated, and the fear of driness avoided.

Hippocrates sayes, (aphor. 1. 11.) It is hurtful to give meat in Fits; we must therefore abstain the whole Fit, if it may be; but if not, then till its declension: but if we may not do that neither, however we should avoid the beginning and three hours before, unless in *picnobolus*, or those who vomit up Cholera, who faint away through the acrimonious Cholera that at that time flows plentifully towards the Mouth of the Stomach, unless there be some fresh food there, by the mixture wherewith, it may be dulled; for if meat be put off in these, as it is wont to be in other febricitant Persons, of an intermittent there is often made a continual Fever, and for a simple one, and one that would end with sweat, if meat should be given in the beginning, there ensues a syncopal or swooning one, and for one that would end in health, a mortal. But if meat be given even in the very time of the Fit, it sometimes not only hinders these dangers, but also prevents the Fever it self, which chiefly happens in those that vomit Cholera: Yea and moreover in others in whom there begins to be moved a Cholera that is not so much, thick and putrid, as little in quantity, thin and very adust and fumous, through the twitching whereof the sensible parts begin in many to be pricked and quake; and yet this Cholera, by taking something to eat presently, or perhaps by drinking some Wine diluted with water, is so attemper'd, that they give over shaking or to be feverish at all. But it is certain that this happens seldom, or scarce ever, but in those that are very hot and dry by Nature, for it seemeth to be agreeable to this nature only. ¶ *Oribasius* speaking of old Men says, that when they have Agues, they must necessarily have food allow'd them in the very Fit: for they abound with a glassie Phlegm which in them passes not into aliment; and therefore they must often and importunately be refreshed with meat, though there be instant danger of death.

II. Some Practitioners prescribe *Ptisana* (a very convenient aliment, which tempereth the Blood and Cholera, cuts and detergeth viscid matter, allayeth thirst, takes away the roughness of the mouth and, in general, of all the Pneumatick Organs, makes the Breath ease, &c.) I say they prescribe ptisana with sweet Almonds bruised; yea at the same meal they allow an Egg, Panada and Flesh, against *Galen's* opinion (l. 2. de v. ac.) who sayes that manifold meats and such as are of different faculties cause a perturbation of the Belly. But 'tis answered, those things which are given, either all of them come under the notion of meat, (or at least one;) Then, the Fever is either short, and then 'tis better to give simple meat, or at least to mingle meats together, that are of a simple faculty; or Chronical, and then it is best to give fewer sorts of meat: at the same time yet because the Disease is long, and the Patients cloy'd and queasie-Stomach'd, several meats, as Eggs, Panada, Flesh, Fruits, may be allowed at several times: or some of them come under the notion of sauce which may be mixed with the meat; for the aliment keepeth its proper vertues, and by the sauce is made more

pleasant to the smell and taste, and more effectual against the morbidick matter.

As to the quality of the food, *Hippocrates* declareth (aph. 16. lib. 1.) Moist food is good for all febricitant people, &c. For seeing a Fever is an hot and dry Distemper, by the rule of contraries it requires coolers and moistners: for according to *Galen* (lib. m. m.) cooling is most proper for Fevers; inasmuch as heat is wont always to offend in them, but driness is not always troublesome; and *Hippocrates* himself (lib. de morbis) in several places directs, to cool a Fever as quickly as we can: Seeing this is manifest to all, he makes no mention (in the foresaid aphorism) of a cooling but only of moist food, because it is not so plain, that moistning is convenient for Fevers. By moist food we may either understand that which is moistening, or that which is liquid and may be suppd: That which is moistning is very profitable for Fevers, both because it corrects the driness which the febrile heat accelerates, and also because it tempers the preternatural heat, for driness is the file of heat, and moisture blunts it: That which is liquid and may be supd is alwayes prescribed by him, *Galen* asserting, both because it is the most easily concocted in the Stomach, and also more easily enters into the rest of the Body and into the remoter Veins; for the natural heat being tainted by an extraneous, concocts more weakly, nor is it to be wearied with more solid meats, lest if they remain crude, they be corrupted, and thence encrease the Fever: for which cause we must beware of either roasted or boiled Flesh, which although perhaps they may be potentially moist, yet their substance is too hard to be well enough concocted by the weak heat of febricitant persons; whence Flesh-broth is better than Flesh it self. But though the food ought always to be such as may be supd, yet it should not always be cooling and moistning; for in regard of the cause which is joined with the Fever, or of some other Disease, or Symptom, it should sometimes be hot, sometimes dry, as in Fevers proceeding from Phlegm and Quartans, Pepper is allowed; also if the Fever be accompanied with a Dropsie, the Colick or obstruction, herein we must not use moistners and coolers, but hot openers according to *Galen's* comment on the foresaid aphorism.

IV. Whether are their meats to be seasoned with Salt? *Capivaccius* is against it (l. 6. c. 28.) and altogether rejects Salt: but I think it may be granted, if it be so administered as not to make the meat Salt or powder'd, but to take away its unfavoriness and unpleasantness. First, because that which refresheth, nourishes, according to *Avicenna*: and most meats are unsavory without it, whence they do not only not nourish, but they also cause a nausea, whence other harms spring. Secondly, Salt Meats, according to *Galen* (3. de al. fac.) cause dejection and open obstructions: Himself (7. m. m.) in the cure of a dry Stomach grants salted Bread; and by a stronger reason it is agreeable for febricitant persons. Add hereunto Aphor. 2. 38.

V. Whether is Milk to be granted? It seems to be hurtful, both by reason of its cheesie substance which turns into nidour, encreases thirst, fills the Head with vapours, encreases the fervour, and causes obstructions; and also of its Buttery part which is apt to be inflamed through its fatness; *Bilious* proceeds from fat, says *Hippocrates* (6. Epid. 5. 14) and lastly of its serous part which partakes of a nitrous quality. Milk is either used as nourishment, in which sense it is condemned by *Hippocrates* aph. 5. 64. or as Medicine, especially that of Asses, for this being more watry may be drunk even in a burning or continual Fever, according to the prescription of *Hippocrates* (l. de rat. vict.) or it is used for refrigeration, or for evacuation by stool, but in a great quantity, for so it descends more quickly, and makes

Capivacc.
lib. 6. c. 21.Vallef. m. m.
l. 1. c. 9.See Zacut.
P. H. p. 539.Pri airof. lib.
de feb. p. 153.

makes no stay in the Stomach, so that hence it is neither concocted nor assimilated; It washes down the choler, purges out the fifth of the Guts, moistens and greatly cools.

VI. 'Tis doubted whether *Fruits* be good. *Avicenna* says they all do hurt by their ebullition and corruption in the Stomach: *Galen* writes that no Fruit almost is of a good juice, but that the *fugaces* or horary have plainly a bad juice, so that unless they be quickly cast out by stool, or if they be corrupted in the Stomach, they breed a juice not unlike to poison: others on the contrary grant several Fruits, especially the cooling, as Melons and the like. But we must know, that if any fruits are granted, they are granted rather as Medicine than Aliment: And it cannot be denied that most of them are easily corrupted, especially in a Stomach indisposed by a febrile heat, and that vicious Humours are thence generated that very much encrease the Fever: And by how much any fruit is otherwise the apter to be corrupted, by so much the easilier is it corrupted in Fevers: for most of them do not transpire well, yea hinder transpiration, as Melons: but if our Patient be so dainty that we must indulge them, we must rather permit them to taste them than to eat them freely according to *Galen* (1. ad Gl. 9.) otherwise that food is to be appointed which *Hippocr.* prescribed, viz. of the juice of *Pistia*, till the crisis, or some such like. Yet acids may be granted more easily, to extinguish too great thirst and heat, such as are Pomegranats, Citrons, Lemons, Barberries, or their juice, Gooseberries, Cherries; all which yet are rather aliments than Medicines. *Sennert.* See *Zac. P. h. l. 4. c. 3.*

Sennert.

VII. Some quite reject *Fish*, as easily Putrefying, others admit them: but here is need of a distinction of Fevers and Fish; for Fish are more fitly given in Choleric Fevers: Yet alwayes such are to be chosen as yield a better nourishment, as those that live in stony Rivers.

VIII. *Saxonia* says, 'tis a heinous thing at *Venice* to give febricitant People Eggs: And of Flesh 'tis observed, that those who eat it in Fevers dye, in *Crete* and other places of *Greece*. *Sennertus* grants them both; Eggs, because they are of easie concoction and good aliment, and because Men in these Countreys, being not accustomed to that thin Diet to which the Ancients were, do bear them well enough, without any encrease of the febrile heat, or avocation of the natural, if so be they be given in a little quantity and in due time: And he rejects not the use of *Flesh*, although it hurt in *Greece* because of the notable heat of that Country, and because Men there do easily tolerate a thin Diet, whereas the more Northern People that are accustomed to a thick Diet eat it without harm. Yet *Dr. Tho. Willis* has observed that the eating *Flesh* and Eggs prolongs Fevers. Likewise *L. à Fonte* (Conf. 5.) disallows of Eggs, 1. because, according to *Hippocrates*, a full Diet (such as Eggs afford) is not convenient in the beginning, augment and state; 2. because foul Bodies are not to be nourished with meat that easily putrefies; but Eggs are such because of their too great moisture; 3. because, according to *Alexander 2. Probl. 84.* the yolks of Eggs heat, &c.

IX. There is no reason Physicians should stick so much at granting crude Lettuces to febricitant Persons, and make them eat them alwayes boiled, especially in the Summer: for indeed they have hardly any hurtful quality but cold and moist, whence the too great use of them may fill the Belly with too much moisture and weaken the Stomach; and perhaps they will sooner do this harm boiled than raw, contrary to Coleworts, Bete, &c. for these having a malignant and nitrous quality want boiling to correct them; but Lettuce having

none, it needs not so much as washing to prepare it for eating, and it is made looser and exsolvent by boiling. *Galen* (2. de alim.) having for a long time formerly used raw Lettuce, says that he began to use boiled for no other reason but that his Teeth were worse.

Vallef. 7. Ep. p. m. 881.

X. Those who advise to pour upon their Meats the juices of Pomegranats, Citrons, Lemons, unripe Grapes and other things of like quality, are not approved by me, because these things have no regard to the obstructions which are the chief both cherishing and efficient causes of the Fever.

P. Salus D. de feb. pestil. c. ult.

XI. But as these astringents are not approved by me, so are sweet things condemned; both because these destroy the Stomach, and also easily turn to Choler, whereby the internal burning may be encreased: wherefore let all things that are prepared with Sugar be here omitted; and let that great and continual use of Sugar, which is ordered by many that Practise Physick ill, be avoided.

idem ibid.

XII. *Pistia* or Barley-broth is greatly commended by the Ancients in acute Fevers, not only because it cools and moistens, but chiefly because it takes away that asperity or roughness that is introduced into all the Body by the febrile heat. That a Remedy may be able to take away asperity, 1. it must be moist; 2. it must not be biting; 3. it must have a lentor or clamminess: and such is *Pistia*: hence Vinegar, though cold, is not good for febricitant Persons, because it exasperates, whence the Fever becomes harder to cure.

XIII. Wine seems not to be good in Putrid Fevers, because it nourishes very much, encreaseth thirst and pains of the Head, affects the Nerves, &c. yet *Hippocrates* was very daring in the use of Wine, as is manifest in his Book *de acut.* and in other places. *Alexander* (2. probl. 62.) grants a little and thin; and not undeservedly, for White-Wine, that is thin (especially in those that are used to it) when there appear signs of Concoction, is good, after other evacuations, to concoct the remainders of the Humours, to provoke Urine and Sweat, and Sleep. *Galen* (2. de acut. 8.) writes that it was a custom in *Italy* to grant *Sabine* Wine, that was thin, to all febricitant Persons: yet in the same Book 1. 40. he confesses that he used to indulge to his Patients a little Wine diluted with clear water, though 11. and 12. meth. and 1. ad Glau. 14. he admonishes to forbear, if there be a suspicion of a *delirium*, or if there be an heaviness of the Head or a Catarrh, or the Morbifick matter be crude, or be concocted but plentiful, no evacuation preceeding, especially in continual Fevers, unless the Patient be ready to faint away. And we must not chuse red, but white, and that not yellow, but thin, watry or diluted with water; not sower, or sweet, or thick; and 'tis rather to be granted to those that are accustomed to it, than to the not accustomed: In slow or intermitting Fevers more liberally, but in others more sparingly and very watry; not for the Fevers sake, but the cause, whilst by accident the more intense heat attracts to it self the more remiss, and consumes by inciding and dissolving; or for the accidents, as to strengthen the faculties, &c. *Galen* in his Book *de cib. boni & mali succi*, c. 8. says, *White-Wine that is harsh, hath a sensible vertue to cool.* Which is to be understood, not in respect of other Wines but absolutely. Therefore all Physicians almost now a days do err that will not allow any Wine to febricitant Persons. Let other places of *Hippocr.* and *Galen* be considered, as 3 de rat. v. 7. and 8. and 6. Epid. 4. t. 15. and elsewhere *Galen* commends watry harsh Wine to People in Fevers: where it is forbidden when the Disease is crude, it is to be understood of the yellow, and not of the white and watry. As for my self when I find a small thin Wine, I allow a little to my Patients, although febricitant, safely and with

Horst. de febr. quest. 9. exercit. 4.

idem ibid. 2.

with great benefit. *Sanctorius* (art. parv. cap. 100.) gave it even in a malignant Fever: *P. Poterius* (cent. 1. cap. 81.) says, because there are many Fevers, for which Wine is not at all ill, especially for those which have their seat in the Stomach, if so be such Wine be given as disturbs not the Head, though in a pretty quantity, it sometimes effects a cure, according to *Primrose* l. 3. de vulg. err. in Med. cap. 18. The same person adds: The propriety of a man has great power in the cure of all Diseases; and there are some so very much addicted to Wine, that even in the extreme Sickneses they cannot abstain from it. Add to these *Canonberius*, of the admirable vertues of Wine, who (Lib. 1. cap. 3. §. 18.) writes thus, We may use Wine in Fevers and as Aliment; and §. 25. Wine procures Sweat, and by it not a little of the serous matter is carried forth by Urine. Let the Reader compare with these, *Costeus* in *Tract. de Potu in morbis* lib. 2. *Hippolyt.* *Obicius* & *Hipp.* *Antonellus* in *apparatu Animadv.* upon the same.

XIV. *Hippocrates* greatly disallows of Water for ordinary Drink, and as much commends it as a Medicine, namely when drunk in a large quantity. Now he says it hurts in ordinary drink, because it is thick, passes not through the Hypochondres, and in cholerick Persons easily turns into choler, for being conquer'd by the febrile heat it easily Putrefies, otherwise because it is cold and moist it is wholly contrary to the Fever, and therefore is good for it. In those therefore who are used to drink Water, I see no reason why it may not be granted; but it will be better if it be corrected with the mixture of other things, yea it may be boiled to make it the thinner: Some will have it distilled, and then to be temper'd with the mixture of cooling and opening Syrups; some would have Bread so soaked in it that it may a little imbibe the vertue of the Ferment; others would have Cinamon infused in it, &c.

XV. Beer, although it be small, yet it always has some faculty to heat and make drunk, although that vertue be less and weaker in small than in strong; whence it is not so good for those that are in acute Fevers and whose Head aches, because it inflames and causes thirst if it be drunk plentifully, as Febricitant Persons use to drink that are very dry. You will object that Beer is only Barley-water, nor does it acquire any quality that is adverse to a Fever from the addition of Hops, seeing Hops are usually prescribed to deplete the Blood. But Experience teacheth that there is a great difference betwixt Barley-water and Beer, seeing the Water cools, and drink as much as you will it never inflames nor disturbs the Brain, nor causes thirst; which cannot be said of Beer even though it be small. And the difference depends upon this, that Beer is not made of simple Barley, but of Mault, (which is Barley steep'd and dried) and dry Hops are added which heat sufficiently; then it is fermented, whence it acquires an hot quality, which is not in Barley-water nor Ptisan; and therefore it seemeth to me not so good: Yet its use is better to be born with than that of Wine, because it is less hot, and is Diuretick. Add, that a Spirit is drawn even from small Beer.

XVI. In giving Drink to People in acute Fevers, 'tis fitting to use a measure, lest on the one hand by too much moisture, which is improper for Febricitant Persons, there spring either a greater crudity, or a fouler and longer Putrefaction; or on the other side by too much driness the accidents be increased and the Body consume: Yet this one thing is worth noting, that Drink being mixed with Meat is easier concocted, doth sooner refresh, and doth less burden weak Nature; whence it comes to pass that on the first day of an acute Fever we may forbid all moisture, unless the Patient be so weak that on that account Food is necessary: but on the last days, when driness and burning are urgent, we must give Drink more freely, especially if there shall be manifest concoction.

XVII. Drinking in the Fit of an Ague is very hurtful, for hereby just like as when Water is thrown upon a red hot Brick, there is caused such an ebullition of Humours, as that both the Disease and the Symptom, thirst, are increased. ¶ And yet we ought not pertinaciously, as some do, adhering to the indication from the cause, neglect the intemperature; for it is better sometimes to let the Disease be prolonged, than that a man should be presently burnt up. ¶ I have found by Experience that hereby there have often sprung continual and mortal Fevers of intermittent ones and such as have been void of danger.

XVIII. In continual burning Fevers, the effect is commonly more urgent than the cause, the Symptom than the Disease: when therefore burning, and troublesome thirst are grievous to the Patients in those Diseases, it seems reasonable to give them their Drink cold, and in that plenty, that it may temper the boiling Humours and extinguish the fervour of the Spirits. To this *Hippocrates* has regard, whilst in many places he commends cold Drink: thus l. de vict. ac. both in the *Causus* or burning Fever and *Quinsy* he gives cold Water: In lib. 4. *Epid.* he says that in acute Fevers 'tis profitable to give cold Water: In 2. de morb. On the second day after the beginning of the Fever, you shall give him as much cold Water as he'll drink: again 3. de morb. he prescribes cold water even that hath been exposed to the open air. But l. de Loc. he says, For Drink you shall give warm water, and water and Honey, and Vinegar with water: for if the drink be not received in cold, being and remaining warm it will detract from the sick Body, or either will eject by Urine, or will dry: There namely he is more intent upon the cause of the Disease. For drink is given in Fevers upon a double account, either that it may be a vehicle for the food it self; and this should be cold: or for the alteration or exclusion of the Humours, and here warm drink is commended, as also if the Body have not been accustomed to cold, or if the Stomach be cold.

XIX. Give cooling potions to drink in burning Fevers, when you will, says *Hippocrates* 3. de morb. v. 69. Note that *Hippocr.* said not, when the Patient will, but when you, the Physician, will, that is, according to the regulated will of the Physician, and not the perverse will of the Patient. Now these potions are of different operations, for some cause pissing, others going to stool, some both, some neither; some cool only, like as when one pours cold Water into a Vessel of boiling Water, or exposes the Vessel it self full of Water to the open air: Therefore you shall give some to one, some to another; for neither are the sweet, nor the bitter agreeable to all, nor can all drink the same. *Hipp. ibid.* For those sick of a burning Fever do not always require the same way of cure, seeing some want greater cooling, as being of an hard and dense habit of Body; others less, as being of a soft and rare habit: the same coolers are not fitting for all, but one must be given to one and another to another with respect to the Disease, and according to the diversity of the habit and other circumstances. Which opinion of *Hippocrates* if those that commonly practise Physick would attend unto, they would not always inculcate the same things in the same Diseases to all Patients; but when the poor Patients from their proper Nature do often refuse either sweet things, or sharp, or sour, and are set against them, they should lay aside their pertinacy and indulge their Patients Nature and will with variety of pleasing Medicines. Amongst the various drinks prescribed by *Hippocrates*, this is remarkable: Put three or four whites of Eggs in a gallon of water, and having shake't it well, use it for Drink: it cools greatly, and inclines the Patient to stool. Perhaps these whites of Eggs do the same thing here, as they do in Wines when they become too thick, and putting off their proper Nature grow vappid: for

Primros de febr. p. 146.

Idem.

Merc. lib. acid. 1. 2.

for if Eggs being well beat in a good deal of Water, be poured to such Wines at first, they notably rarefie and attenuate them and restore them to their pristin Nature: namely being put into the Wine they cool it, and by drawing the thicker parts to the bottom of the Vessel they attenuate it. The like whereto I suppose to be done in a burning Fever, because they cool by contempering, and by drawing down the excrements to the lower parts they loosen the Belly: but let them be crude, for the boiled have less of the foresaid faculty.

P. Sal. Divers.
comm. in.
lib. 3. de
Morb. p. 339.
and 347.

XX. I know the use of Barly water is condemned by some very famous Physicians, affirming it to be the invention not of the Greeks but Arabians, that it is windy and offensive to the Stomach. 'Tis apparent such are little versed in reading Greek Authors, from lib. 3. de morbis where Hippocrates advises to take about a pint of large and full Achillean Barley, and when it is dried to take off the hawns and wash it well, then to put a gallon of water to it which must be boiled half away, and when it is cold given to drink. It is not true that this drink is windy, seeing the *flatus* are in the substance of the Barly (which being not well concocted reserves its *flatus*) and not in the water; but the water and not the substance of the Barley is given: and if there were any fault before in the water, it loses it in boiling, for boiling takes away the malignity of many things. Whereas it is said to be offensive to the Stomach, it is not so to all Stomachs, but only to those which are more cold; but it will not be hurtful to others, but rather a safeguard and shield, when the febrile heat abounds and is fervent: wherefore such offence will not be on the part of the water, but of the Physician that administers it without distinction, and has no respect to the Stomach of the Patient. I declare that I have found the use of this water profitable in our art, and have given it plentifully, but not to all alike and without distinction: I have given it in burning Fevers, when signs of concoction appeared; cold, when the Stomach was strong; warm, when languid; and in great plenty, even as long as they would drink it: In other bilious Fevers in the last part of the state, more willingly in the beginning of the declension, especially if the Intermissions come every third day.

P. Sal. Div. 3.
de Morb.
p. 342.

A. Ferrer.
castigat.
cap. xi.

Fennert. lib.
de febr. c. 9.

XXI. I wonder what some mean in giving Water in Fevers; when they order it to be boiled long and much; seeing as Galen testifies (which sense also confirms) by long boiling it acquires a Saltiness, and at length, like other things, a bitterness; whence it will happen that the febrile heat will not be extinguished, but rather encreased by it.

XXII. Those err who grant Water through the whole course of the Disease; for then it hinders the concoction of the Humours, it is difficultly concocted, and stays long in the Belly before it be distributed; it neither cuts, nor cleanseth, nor of it self loosens, nor provokes Urine; therefore it is not to be granted save in the acute, in the state, when concoction is finished.

XXIII. 'Tis a doubt whether the Sick should be nourished more in Winter than in Summer. For Hippocrates 1. apb. 18. and 3. de dieta hath expressly taught, that febricitant Persons do easily endure Meat in the Winter, not so well in the Spring, least of all in the Summer and Autumn: In the Summer namely the Sick do worst of all endure Meat, because not only the Belly is rendred more sluggish in respect of its office, through the driness of the Disease; but the natural heat is then at a low ebb: but in the Winter most easily; for though the Belly be then also rendred sluggish, the Disease remaining dry even then, yet the natural heat is increased, whence Meat may be more easily endured in the Winter than in the Summer and Autumn. On the contrary

Avicen (1. 4. Cap. de cib. agrorum) says, that the Sick are to be fed in the Winter, but more in the Summer: he gives a reason, because in the Summer there are greater resolutions, whence consequently for the restauration of what is lost, there is need of more Aliment. To resolve this, we must note from Mercurialis (1. 5. de febr. c. 8.) That Aliment may be said two ways to be more or less; either as to its vertue, or as to its bulk: In the Winter indeed our Bodies should be nourish'd more as to the vertue and strength of the Aliment, but more in the Summer as to its bulk. The reason is, Because the substance of the natural heat is greater in the Winter, and less in the Summer (1. apb. 8.) because then much (Pituita or) Phlegm is collected, which is the Aliment of the Blood and natural heat: Hence Galen hath placed the substance of the natural heat in the Blood and Phlegm; therefore strong Aliment is fitter in Winter than in Summer: But in the Summer when the preternatural heat is greater than the natural, and upon that account there are great resolutions of the Body, it comes to pass that it needs Meat indeed for the recruiting of the wasted strength; but that Meat ought in no wise to be so strong: Which when Galen saw, he said that our Meat was to be divided into divers Portions, which Avicen also approved of; but that in Winter it was sufficient to eat once or twice a day, because in that Season it is better concocted, and the Excrements are generally fewer.

L. de placit.
Hipp. & Gal.

1. apb. 18.

Gr. Horstius
Exerc. 4. de
feb. qu. 3.

XXIV. Concerning Sleep we must note 1. That Sleep is always hurtful in the beginning of a Fit, because then the faculty is strong, and the cause of the fit intire and not evacuated as yet nor lessened; wherefore it neither needs retraction of the heat nor union: nay if the heat be then withdrawn, the faculty is more oppressed through the multitude of the Humour, and the heat is made more preternatural, and is defiled through the commerce of the Humour and vapours, and by this means the Fever is prolonged, because its cause is not dissolved, yea it remains in the Body too fixed and rooted when it does not exhale to the outer parts. But in the declination it is always good, for the faculties being dissolved and wearied from the foregoing terms (viz. the beginning, augment and state) they desire rest and firmitude: moreover the cause of the Fit is now overcome, dissolved and turned into vapours, which when they are dispersed to the outer parts and are distant from the principal parts, are not so easily retracted. If sleep therefore come upon the Patient then, it refreshes the faculties, seeing now that the load is taken off they are not oppressed; yea by the Blood and Spirits retiring to the inner parts, the faculties being collected and more brisk end the Fever, or stoutly shatter the reliques of the Humours. Sleep in the state is doubtful, for it sometimes does good, sometimes hurt, which flows from the various disposition of the Body and diversity of the Fever: for if the Body be hot and dry and prepared for resolution, then sleep is profitable in the state of the Fit, for it moistens, refresheth the faculties and makes the fit shorter: On the contrary if the Body be hot and moist, of a dense habit, sleep is unprofitable, for then there is neither need of refection nor moistening, yea if it come, the resolution of the morbid cause is hindered, and the state and declination are prolonged. In like manner we must think as to the diversity of the Fever, for if the Humour do more offend in quantity than in quality, such as are the Phlegmatick, the Melancholick or the bastard Tertian, then sleep profits not, but hurts: On the contrary if the Humour offend and urge more in quality than quantity, as a bilious Ague that springs from sincere choler, so that by its thinness, heat, and Acrimony it presses and wearies the faculty, then sleep is profitable. The same is to be said of the last part of the augment,

ment, which 'tis certain represents the nature of the beginning. We must Note 2. That this doctrine is to be understood not only of the particular termes of every Fit, but of the universal : for in the beginning, because Nature is oppressed, Sleep is not so convenient, but 'tis more convenient in the augment, and far more in the state, but most of all in the declension, for by its help the Spirits are refreshed, and the reliques of the Humour are concocted and wasted. This is the cause why the longest Sleep is granted in the declension, in the beginning very short, and in the middle terms indifferent : But if sweat be at hand or break forth in the state, Sleep helpeth greatly, if signs of concoction go before : for Sleep hinders all evacuations except sweat, which it promotes.

Zacut. Pr.
Hist. p. 545.
See more
there.

Diaphoreticks.

(See Alexipharmacks and Sudorificks.)

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I. **D**iaphoreticks and Sudorificks differ from one another in degrees ; the former discuss halituous excrements by insensible transpiration, and promote the same transpiration and ventilate the Blood ; the latter do this also, but leave a more manifest effect by a dewy sweat. And they operate inasmuch as they fuse the Blood, and procure a separation of the Serum from it, that it may be expelled through the pores of the Skin in the form of Vapours.

II. Both 1. by absorbing, and resolving that which binds the serum and makes it more fixt, as the more fixed alkaline, and earthy Medicines, for instance, Antimonium Diaphoreticum, Shells, Harts horn burnt, the Bezoar stone, Bole-Armene, Bezoardicum minerale, &c. these do greatly precipitate the fermentation of the Humours, and set insensible transpiration free and at liberty.

III. And also 2. by making it fluxile, whether by rarefying of it, and inducing a new fermentation on the Blood : Thus 1. lixivial and nitrous Salts, Salt of Wormwood, Carduus Bened. Centaury, which both absorb, and also make the serum fluxile ; thus 2. Volatils, the Spirit of Harts-horn, of vipers, of Ivory, do very powerfully drive forth sweat ; or by yielding an halituous vehicle and volatility, such as are 1. the aqueous, as divers distilled waters, and especially some decoctions that enjoy also a certain volatility ; also 2. those that are easily resolvable because of their watry and Gummy substance, as the rob of dwarf-Elder, Elder, &c. but chiefly 3. those that are indued with a volatil Salt intimately mixt with a Sulphur, the bitter resinous, &c. so card. bened. opium, Camphor, the Wood Guaiacum, and amongst compound Remedies Treacle, Mithridate, and the rest mentioned in the first class, these promote the sluggish motion of the Se-

rum, and put nature upon discussing superfluities, opening the Pores, and vigorating the mass of Blood. And these have place chiefly in a Rheumatism, or any flux whatsoever of the Blood and Serum, for instance in the Inflammations of the Pleura, fluxions of the Joynts, &c. whence they are good in the Pleurisie, which has often its Throat cut as it were by some eminent Sudorifick in the beginning ; in the Gout, which is helped most of all by the same sweats ; in Tumours of the Groins, Tonfils, Armpits and the like ; in Fainting, Swooning, both solitary and hysterical ; and when the Small Pox or Measles come not out well.

IV. Likewise 3. by inciding the curdled serum and promoting the fermentation of the Blood also by this very means. Those Medicines that perform this are chiefly acids, and alkalines also after their manner, to wit in a different respect : hence vinegar as likewise other acids, are deservedly reckoned among sudorificks. For it is an observation not to be slightly esteemed, that Sulphureous Medicines by the accession of acids do far more readily act, and procure sweat more than when left to themselves : the *mistura simplex* alone may serve for an instance ; for neither the Spirit of Treacle of it self, nor the Spirit of Tartar do so readily procure sweat, as when the Spirit of Vitriol is joined to them, for this doth promote both their activities : So also the tincture of Bezoar without the addition of the Spirit of Salt, or some other acid, is less apt to cause sweat. Now when the Blood curdles, it becomes more gross, viscid, thick and glutinous ; whence acids, by taming the Sulphur, and hindring rarefaction as much as may be, do in such case promote the separation of the serous Humour, and by this means promote also its halituousity. Whence these and the Diaphoreticks of the first class are profitable (being choicest according to the diversity of Indicants) even in divers kinds of Fevers, especially also in the Pox, Scurvy, Leprosie, and the like, where the Blood being much too glutinous doth necessarily import a weight and pain of the membres. These very Medicines also of this class have a great vertue to take away the grumousness of the Blood ; whence also the *mistura simplex* has no contemptible use in the palpitation of the heart it self, also in the scab and many other maladies. In a word, in any faults of the mass of Blood, arising from the quality and vitious excesses in motion, ebullitions, despumations, &c. diaphoreticks bear away the bell, both restoring and depressing the ferment.

V. But inward Impellents have need of externals ; whence it is not enough to take a Diaphoretick Medicine, but at least there is need that the ambient air should be warmer than usual and that the Body be cover'd, as also that the pores be more dilated and the Humours fused : But the business is never accomplished by externals alone, unless when the matter sticks more betwixt the Skin and Flesh ; for in that case external impellents do more good : Likewise when a particular tumour exerciseth and wearies some membre, the same are useful.

VI. Nor avail they only in the abundance and repletion of Humours and impurities of the Blood ; but they also make the sluggish Humours more brisk and lively ; but they are chiefly good for resolving and attenuating of serous Humours, and evacuating them by the pores : whence the fixedness or volatility of the Medicines, and the different state of the Blood varies their use. There are some who always use antimon. diaphoret. only ; others cry the Spirit of Harts-horn up to the Sky ; others use the tincture of Bezoar, especially the camphorated, almost for all cases : All these offend, but chiefly the last ; for all cannot endure alike camphorated Remedies, at least in so great a dose as greatly rarefies the Blood. Camphor hath a no-

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table place in invigorating the motion of the Blood, but not where it is too much rarefied and Boils, for in such cases it makes the watching, thirst and heat to be greater; whence it is better to use the tincture of Bezoar not so much camphorated, or rather to have some other milder at hand.

VII. Whensoever therefore resolution of the strength is feared, and the Blood stands more in need of a Bridle than a Spur, the more temperate bear away the bell and are to be preferred; and on the contrary. So especially *Hofman* observes, that in a certain Epidemical Fever, joined with a colligative Sweat, Bole-Armen, and sealed Earth were the only Remedies. But if any should give the same alone to promote the motion and fermentation of the Blood, he would make himself ridiculous.

VIII. Where there is more need of Precipitation than Discussion, the Patients are to be less compelled to Sweat; yea Sweat being too much forced does less good, even in continual Fevers. Hence those do egregiously err in their Practice, who in Tertians and Quartans by giving a febrifuge Powder before the Fit, do continually prompt and almost compel their Patient to Sweat; from whence we have observed that a fear of a Consumption and other no light Symptoms have sometimes arisen. Hence in driving out the Small Pox, also in malignant Fevers it is never adviseable to force the Patients too strongly to Sweat, for by this means the Serum is too much consumed, the Blood it self is more excited to ebullition, and the endeavour of Nature that is acting aright, unseasonably precipitated; and therefore 'tis better to continue a Diaphoresis or gentle breathing, and to give Nature time, than spoil all by forcing; it is better to follow her, to lead and not drive her: that which Sweat performeth not, a thin dewiness does.

IX. They are less profitable wheresoever Serum is wanting; yea and if it exceed, they are not so good neither: for as, when it fails, Hydroticks do more exhaust it; so when it is superfluous, they cannot alone conquer and evacuate it: Hence for example, in the distracted and other cholerick Persons also the rule now given holds: whence in that case either the more temperate only are to be chosen, or they are not to be given without watry vehicles that increase the Serum substantially; which very thing holds of the drier sort of People in general: Hence in hydropical Persons Diureticks and Purgers do more good than Diaphoreticks.

X. In Phlegmatick Diseases, and where the first ways abound with vicious Humours, and these are fixed there as it were, they are not so good. Hence Purgers and Vomitors are more universal Remedies as it were; and after these, when the thicker and more viscous Parts are taken away, the thin that remains is more fitly evacuated by Diaphoreticks. Hence in all Fevers indeed Diaphoreticks profit greatly; but in the intermitting that is diligently to be observed, especially in the Quotidian: The same thing is to be noted also in the Scab it self; and in a Cachexie Diaphoreticks have but a secondary place, lest they coagulate the Phlegm or Serum more that is already coagulated and too thick, lest they disturb the Humours, and more increase the impurities of the Blood, which they should take away.

Metel. de
fan. fac.
p. 170.

Diureticks.

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Some are gentle, some strong. XXVII.

When the stronger are to be used. XXVIII.

I. **T**HE Origins of many Diseases happen for want of a due separation of the Serum: but as to this separation, seeing there are faults of divers kinds, the offence is for the most part either in defect or excess: for sometimes the Serum does too pertinaciously adhere to the Blood; and on the contrary, sometimes it parts too soon from it, and in this regard the Blood being not able to contain the Serum doth spue it out of the mouths of the Arteries in many places and almost every where; and so depositing it in the viscera or the habit of the Body, procures an *ascites* or *anasarca*, and sometimes sending it off immoderately to the Kidneys it causes a *diabetes*. When the Blood is too tenacious of the serum, for the most part it is either over hot through a Fever, having its compages too strict, and the thicker Particles so incorporated with it, that the thinner cannot easily get therefrom; or being filled with scorbutick Salt and Sulphur, it becomes very clammy and tenacious, so that the serosities do difficultly slide out of the embraces of the rest. And seeing the departure of the serum from the Blood is hindered or perverted so many ways, Diuretick Medicines also are of a different Nature and Operation, which yet may be distinguished 1. as to the End, according to which they respect the mass of Blood, or the Kidneys, or both together; 2. as to the Matter, in which respect they are either Sulphureous or saline: And these again are various, according as the saline Particles are in a state of fixity, fluor, or volatility; or are moreover nitrous or alkalizate: 3. As to the Form, these Medicines

Medicines are of divers kinds, Drinks, Powders, &c.

II. When the Blood, through an incorporation and mutual combination of the fixed Salt with the Sulphur and Earth, becomes so thick and tenacious, that the watry Particles do not easily part from the rest, the Diureticks which may loosen its compages and fuse the serum, must be of such a sort, as are endued with a volatil or an acid Salt; for such Particles do chiefly dissolve the combination that the fixed Salt has entered into: And seeing this disposition is common both to the Fever and Scurvy, in the former the most proper Diureticks are both the temperate acids of Vegetables, and also the Salt of Nitre, the spirit of Sea-salt, of Vitriol, &c. likewise those endued with a volatil Salt, as the spirit of Hartshorn, of Sal Armoniack, the Salt of the juice of Vipers. In a scorbutical Disposition, when the Urine is both little and thick, the juices of Herbs, and both acrimonious and acid Preparations are of notable use: also the salt and spirit of Urine, of Sal Armon. of Tartar, &c.

Idem.

III. Sometimes the Blood keeps not its serum long enough within its compages, but being subject to fluxions or rather coagulations, and depositing the serum here and there in great plenty, it raises Catarrhs or Tumours in divers places: Or the Blood being habitually weak and withal dyscratick or intemperate, namely inclining to sowness, is apt to coagulate as to its thicker Particles; so that in the circulation the thinner being thrown off every where, and falling upon the weaker Parts, cause sometimes Cephalick or Thoracick Distempers, sometimes an *Ascites* or *Anasarca*; and from a like cause we think a *Diabetes* also springs: For many dangerous Diseases, which are mistakingly ascribed to the dyscrasies of the *Viscera*, arise from this cause: namely inasmuch as the Blood being of an evil temper, and liable to coagulations, cannot continue the thread of the circulation entire, but in divers places deposits the Serum that is too apt to depart from it. The Diureticks to be administer'd in this case are such as do not fuse the Blood, but take away its coagulations, as are those endued with a fixt, volatil, and also an alkalizate Salt; moreover those that strengthen and restore the Ferment of the Kidneys, as some sulphureous and spirituous. For these purposes are sulphureous, and mixt Diureticks, the lixivial Salts of Herbs, Shell-Powders, the Salt and Spirit of Urine, &c. Hog-lidge, the roots of Horse Rhadish, the seed of Smalledge, Nutmeg, Turpentine and its Preparations, the spirit of Wine, the vertue of all which is not to fuse the Blood, and to precipitate the Serosities out of its mass (these things acids chiefly do, and in those cases often hinder making water) but to dissolve the coagulations of the Blood, so that its compages recovering an intire mixture, and being circulated more quickly through the Vessels, it reabsorbs the Serum that was every where extravasated and deposited, and at length delivers it to the Kidneys to be sent off. We shall shew afterwards how the Diureticks of every kind operate according to these two almost opposite ends of curing.

IV. As to saline Diureticks, we must know, that what Salts soever of a different state are mixed together, do catch hold of one another, and by and by are joined together; and while they are so combined, that other Particles which are loose from the mixture, do retire by themselves or fly away. This is seen when a fluid or acid Salt is joyned to a fixed or alkalizate; also when a fluid or fixed is put to a volatil or acrimonious. From this affection alone of the Salts does all the matter of all Solutions and Precipitations whatsoever depend. Wherefore seeing the Blood and Humours of our Body abound with very much Salt, which uses to be diversly changed from one state to ano-

ther, and thereupon to acquire a morbid disposition; and seeing moreover there are divers kinds of saline Diaphoreticks, namely such as are endued with a fixt, fluid, nitrous, volatil and alkalizate Salt; there will always be need of the great discretion and judgment of the Physician; that the saline Particles in the Medicine differ from those in our Body: In what manner this should be done, we will set forth by running through all the kinds of saline Diureticks.

1. Amongst the Diureticks imbued with an acid Salt, are the Spirits of Salt or Nitre; also the juice of Lemons and Sorrel, White Rhenish Wine and Cyder are of greatest note with the vulgar, and often perform that intention: For these alone fuse the Blood and precipitate it into serosities, as when an acid is poured into boiling Milk: But this happens not alike to all, nor equally to every one. In an healthful constitution the Salt of the Blood is partly fixed, and partly nitrous, and partly volatil: Also in some Scorbutical and Dropical it becomes commonly fixt: wherefore in all these cases Diureticks endued with an acid Salt are given with success. But in catarrhus Distempers and in some Dropical and Scorbutick, when the saline-fixed Particles of the Blood are promoted to a state of fluxion, and the volatil are depressed (as often happens) acetous Remedies use to do more hurt than good, inasmuch as they yet more pervert the Blood that is already degenerated from its right crasis: So that Medicines endued with a fixed or volatil Salt will be more profitable for these: As for example: Take of choise white Tartar, of Crystallum Minerale of each a Drachm and half, of Crabs Eyes a Drachm; make a Powder, the Dose whereof is from half a Drachm to two Scruples, in a fit vehicle, repeating it once in six or eight hours.

2. That Medicines endued with a fixed or lixivial Salt provoke Urine, appears plainly enough from the vulgar and empirical Remedy that is wont to be given for the cure of Dropies; namely it is usual in an *Anasarca*, and sometimes in an *Ascites*, when the Bowels or Flesh swell very much by a collection of Water, to give to drink a Lye made of the ashes of Wormwood, Broom or Bean-stalks infused in White-wine; whereupon it often happens that there follows a plentiful Pissing, and the Disease is cured. Yet I have observed that in some that Remedy has not proved Diuretick, and has rather increased than cured the Dropical disposition; the reason whereof if it be inquired, appears from what has been said above, That lixivial Salts do not fuse or precipitate either Milk or Blood, and therefore are not Diuretick in their proper Nature: nevertheless that effect sometimes follows, inasmuch as a fixed Salt being taken plentifully destroys the energie of an acid and coagulative Salt prevailing in the Blood; so that the Blood, being before too apt to be fused, and not able to retain its Serum, but throwing it off in every place, does by the advent of a fixed Salt recover its due crasis, and therefore reabsorbing the extravasated Serum and conveying it continually to the Kidneys, causes a plentiful Pissing. As for Example: Take of the Salt of Tartar or Wormwood two Drachms, of Coral calcin'd to whiteness a Drachm and half; of Nutmeg half a Drachm; make a Powder, of which the Dose is to two Scruples.

3. For the same reason as a fixed Salt, is sometimes also a volatil given with success for provoking Urine in an acetous dyscrasie of the Blood: namely inasmuch as its Particles being admitted into the Blood, destroy the prevalence of the fluid Salt therein; whereupon the Blood recovering its due mixture, and being freed from Coagulation and Catarrhs, reabsorbs all the Serum that is extravasated, and delivers what is superfluous, to the Reins, to be sent

B b b b b 2

off

off by the Ureters. To this class of Diureticks ought to be refer'd not only the pure and mixt volatil Salt drawn from Animals or Minerals by Distillation, but also the integral parts of Animals and Vegetables, (such as are the acrimonious Powders and Extracts of Insects and Vegetables.)

4. *Nitre* appears to be a certain kind of Salt, yet it is different from any other Salt, and is neither acid, nor fixt, nor volatil, but as it were in the mean betwixt both states. Thus far it partakes of a volatil Salt, that while it is made, when it should be lixiviated with the ashes and joined with the fixed Salt, it acquires a certain concretion: moreover when it is melted, it is presently set on a flame and flies away upon throwing any kind of Sulphur upon it. But in this respect it communicates with a fixed Salt, that being melted in a Crucible it endures a long and it may be a perpetual fusion without any notable loss of Parts or Particles. Indeed *Nitre* is that by which all Plants vegetate, all Animals live and breathe, and all sublunary flame or fire is kindled and fed. Now 'tis well enough known, that the Salt of *Nitre* cools the Blood, and powerfully provokes Urine, but the reason of both effects appears not so clearly; inasmuch as *Nitre* is so far from containing cooling Particles in it self, that on the contrary nothing is more igniparous or a greater breeder of fire. Nor is it less wonderful how this, whose nature is so fiery, should dilute the Blood so, and fuse it into aquosities for procuring Urine. As for my self, I think that *Nitre* contributes thereto, both as it is a Salt somewhat akin to both a fixed and volatil, and also as it is a thing combustible. As to the first, we observe that *Nitre* (like fixed and volatil Salts) being put in Milk, does hinder or remove the coagulation thereof; likewise that Blood as yet hot being poured upon this, is preserved from coagulation and discolouring no less than when it is poured upon those: So that the Particles of *Nitre* being taken inwardly keep the mixture of the Blood intire or restore it, inasmuch as they prevent or take away the fusions and coagulations of the same from which an *astus* (or heat) and *ischury* often spring. And moreover *Nitre*, as it is fiery, being taken inwardly cools the burning Blood and provokes urine, inasmuch as by its advent kindling more the flame of the Blood that before was turbid and mixed with *sinuok*, it makes it more clear and pure, and therefore more mild: and so seeing the Blood, while it is made by the *Nitre* to burn more clear, is loosened more in its *compages*, the serous Particles are easier disentangled and more plentifully depart from the thicker.

Willis.

5. 'Tis known that *Shell Powders* and some *Stones*, being endued with an Alkalizate or Petrefying Salt, do sometimes provoke Urine, seeing in great *ischuries* (or Stoppages of Urine) the Powder of Eggshells, of Crabs Claws or Eyes, hath been a present Remedy to some: The manner and reason of whose operation if it be inquired, it is very clear that these Medicines do not fuse, nor sensibly precipitate the Blood; and therefore we must say that these things are sometimes Diuretick in an acetous dyscrasie of the Blood and Humours, inasmuch as by their combination they tie and bridle the acid Salts, so that the Blood being freed from fluxions and coagulations, reforms the extravasated Serum and carries it to the Kidneys.

V. *Eur Seline* Medicines are not only reckoned for Diureticks, but justly also some *Sulphureous* and *spirituous*, because these often produce that effect. Most Medicines derived from the Pine or Larch-tree, especially Turpentine and its Preparations, the distilled Oils of Juniper, of Nutmeg, of Wax and other fat things taken inwardly, cause in most a plentiful Urine, and that endued with a violet-like smell. I have known in some hydropical and

scorbutick Persons, that the Spirit of Wine and Strong waters, yea generous Wine it self being drunk largely has promoted Pissing; the reason of all which is, that when the Blood being weak, or growing sower, does not, either through the defect of Fermentation or the dominion of an acid and coagulative Salt, circulate briskly enough and equably, and so keep the superfluous Serum so long within it self as till it may deliver it to the Kidneys, the foresaid Remedies, by keeping the mixture of the Blood intire, or restoring it when it falters, conduce to the provoking of Urine.

Idem.

VI. *Helmont* in his Treatise of the Stone (c. 5. Sect. 17.) thus distinguishes Diureticks as to their effects: 1. Some sharpen the Urine with a corrosive Poison, as *Cantharides*; 2. Others provoke an acidity, and leave it in the Urine and raise a Strangury, such as is new Beer or Ale; 3. Others make the Urine absterfive, as *acidule* or Mineral waters, *Vitriolum Martis*, Crabs eyes; and also the Herbs that every where are called Diuretick, and do all of them contain a volatil alkali, or at least acquire it in Digestion: 4. Some stimulate the sluggishness of the *Archeus*, and increase in it the expulsive Faculty, such as are Horse rhadish, *Asperagus*, &c. 5. Some refresh the Urine and Kidneys with a grateful smell, as Mace, Nutmeg, Turpentine, Mastich, Juniper, &c. as if the Kidneys being comforted by the Odour, became mindful of their office: 6. There are some also which from a lixivial alkali pass under digestion into an acrimony that cleanseth the passages of the Urine, like Soap, and stimulate the expulsive Faculty; and incide the filth that sticks to the passages; of which sort are those which are gathered from Shells and Stones, and the ashes of things appropriate, and which alone seem to deserve the name of Lithontripticks or Stone-breakers, especially if they be brought into a degree of volatility: 7. There is a kind of Diuretick which in a small quantity pours forth a great deal of Urine from the whole Body, as hog-lice, and what things soever contain a volatil *Nitre*, and which by their property excite the sluggish Kidneys: 8. There is also a kind which is profitable for allaying Pains in the Kidneys, comforting them when they hesitate; such a vertue there is in Saffron, Rhubarb and *Cassia*, when they are deprived of their loosening quality. I add those also which not only by an absterfive Faculty, but also by a resolute thrust forward, incide and expel the tartareous dross as well out of the Hypochondres as Kidneys: Thus Spirit of Sea-salt, and of Vitriol are not only Diuretick, but do moreover dissolve the Tartar and bring it out by the urinary Passages. Seeing therefore there is great diversity of them, they are not every of them alike fit to be admittit to every affection and morbid cause, but the nature of each is to be examined more accurately. Thus in the Dropic we fitly use those which are properly called Diureticks, which make the Urine absterfive, and incide the filth that sticks to the Passages, and by their acrimony excite the expulsive Faculty: but those are not to be used here which yield much watriness. Likewise Diureticks properly so called are good when there stick thick tartareous Humours in the Hypochondres and all the Veins; for these can attenuate, resolve, absterge and send them forth by Urine. The morbid cause also is to be well examin'd; for we must first lessen its plenty through other places of excretion, lest while it rushes into the narrow Veins it obstruct them. If there be acrimonious, salt and other sower Humours present in the Body, their acrimony is first to be mitigated or contemper'd, either by specifick digestives, or other appropriate Precipitants, lest they affect the rest of the Parts in their passage. If lastly the urinary Passages also and other adjacent Vessels be either exulcerated or inflamed, or labour under some such Distemper, the

the vitious Humours stagnating in the Body are not fitly moved by Diureticks to these affected and weak parts, unless the matter of the Ulcers be withdrawn both by Clysters and Catharticks. When the *viscera* are obstructed, unless the Diureticks be of that nature as to open, and absterge the Humours withal, they will procure a greater mischief to the Sick, and often do so prejudice the Bowels appointed for Concoction, that a Cachexie after a while ensues. See an example in *Horsius in Epist. Med. f. 8.*

VII. It is to be noted, that all *Diureticks* are not indifferently convenient in any distemper or Humour, for the benefitting of the sick by provoking Urine: but one is to be used in one Disease or offending Humour, and another in another. Some indeed are good for bringing out Choler, and others phlegm offending, by Urine: Proper for Choler are the juice of Citron, the emulsion of Barley, Straw-berries, the Spirit of Salt, the Salt of Tartar vitriolated, &c. and for Phlegm, amongst Chymical Medicines, the volatil Salt of Urine, and otherwise all volatil Salts, the distilled oils of Juniper-berries, of Amber, &c. yea and also the Acids commended just now for choler, because they no less alter Phlegm (yea Acids drive it forth by Urine) than do Aromatics and such as consist of a volatil Salt, as experience alone has taught us: yet the latter are for the most part observed to be the better, and fitter for restoring health, seeing they not only correct Phlegm, but also preserve the Choler in its natural state: But Acids though they incide Phlegm and promote its passing out by Urine, yet they do withal infringe Choler, and carry it from its natural state, and in that respect hurt.

VIII. *Diureticks* are most proper in those Diseases that are firmly rooted, and have their foundation in a *Tartareous, Saline Dregs*, in which it is profitable to evacuate by little and little the occasional cause of the Disease by the Urinary passages. Thus in the Hypochondriack and Scorbutick we empty out of the Body those Tartareous Humours, and preternatural Salts tinged with a Scorbutick ferment and springing from depraved digestions; I say we empty these out of the Body more fitly by degrees by Diuretick aperitives, otherwise called Antiscorbuticks, which withal saturate the force of the excited Salts, than by bare Sudorificks or Purgers only.

IX. By what means do *Diureticks* provoke Urine, and together with it drive forth the *pituitous* and *serous Humours*, seeing they differ very much one from another both in taste and smell, and other sensible qualities? That this may the more easily appear, we must know, that we here speak properly of those Diureticks that draw forth serous and Phlegmatick Humours abounding in the Body; wherefore the reason of that superfluity is first to be considered, which is seldom one alone, but most often manifold. For *Serum* or Phlegm abound in the mass of Blood, either because they are not separated from it, or because they are produced in so great plenty, that they cannot be sufficiently separated and discharged from it. If the *Serum* or Phlegm (*pituita*) be not separated from the mass of Blood, I think that happens not so much through the fault of the Kidneys as of the mass of Blood itself, yea all the fault that is sometimes observable in the Kidneys, is for the most part to be deduced from the same mass of Blood, seldom from their own primary fault, which then is to be deduced chiefly from external cold, or heat. Now the separation of the *Serum* and Phlegm from the Blood, fails for the most part through a more intimate conjunction and union of the parts of the Blood than was fitting, whence there uses to be separated and expelled not only less Urine, but less also of the contents that use to be separated and expelled together with the Urine, when they

abound in the Body and all things are well. And that more intimate union of the parts of the Blood through which neither the *Serum*, nor other things to be separated with it can be separated or expelled, happens; according to my hypotheses, through an acid, sometimes and more seldom through a more pure salt Eye in the Body, whence there is a more intimate conjunction and union of all the parts of the Blood.

X. Whether ought *Diureticks* precede the use of *Sudorificks*? We must know that sweat may sometimes be provoked without provoking Urine, especially when the Humours are only contained in the extreme Vessels: But it is far safer if Diureticks precede, first, Because the Physician does not certainly know whether the serous Humours are retained in the greater Vessels, or only in the extreme. Secondly, Because it is easier to provoke Urine than sweat, and we must always begin with the easier.

XI. We must note by the way, that as sweat does not always presently follow the use of *Sudorificks*; so there does not always presently follow an excretion of much Urine and such as is full of vitious Humours, upon the taking of Diureticks: The reason whereof is manifest; for when the vitious Humours are not apt or disposed for separation and consequently for expulsion, there ought to precede such a preparation of them as is requisite to it, that is, a kindly separation and secretion, upon the performance whereof there readily follows an expulsion of them: Now most Diureticks prepare for excretion, and separate the vitious Humours no less than expell them.

XII. *Diureticks* have a notable faculty to separate from the mass of Blood the vitious Humours that are more intimately mixed therewith, and to prepare them for some manner of excretion; wherefore amongst Diureticks those are always to be chosen which have moreover a faculty to correct the offending Humour. That I may now omit those Medicines which are vulgarly known, I here greatly commend the *sweet Spirit of Salt and Nitre* as the most agreeable for correcting Choler that is more Acrimonious and encreases the burning, as also for glutinous Phlegm, and is withal Diuretick.

XIII. Amongst the ways of evacuation *Diuresis* (or purging by Urine) is of the greatest profit; for by its use and help such Diseases are often cured, as neither Purgings nor Bleedings nor other evacuation could root out. And this is universal, and is reckoned among the *novali methodes* or common evacuations by * *Galen*; and though it purge primarily the gibbous or upper side of the Liver, the Kidneys, Bladder, and the Vessels that belong to these, and evacuate the watry and serous Humour; yet by a certain consequence it may purge the other parts of the Body also and all both Veins and Arteries. Nor does it only purge forth that part of the *Serum* which like a vehicle hath carried the aliment to the parts, and having done its office tendereth to the urinary passages and is by them expelled, but together with the *Serum* Tartareous Salt and other Acrimonious Humours: Hereby the *viscera* are freed from many impurities where-with they abound; superfluous Tartareous Humours being incided and attenuated are exhausted, the whole mass of Blood is restored to its integrity and the constitution of the Body is rendred firm and temperate: so that by this sort of evacuation, what is fitting being premised very many Diseases use to be cured.

XIV. The time of the Disease fittest for the *Diuresis* is either universal, or particular. They commonly say that the Humours are first to be prepared; and that it is not convenient in the beginning of the Disease, nor in the augment, when the matter being as yet crude would rather be agitated than evacuated; but in the declension, rarely

Francisc. de
le Boe tract.
6. § 263. &c.
See more
there accord-
ing to his
Hypotheses.

Franc. Hoffm.
m. m. l. 1.
c. 12.

Francisc. de
le Boe Meth.
Med. lib. 2.
c. 12.

Idem ap-
pend. tract.
10. § 832.

* Lib. de
art. Med.
c. 99.

Franc. Hoffm.
man. m. m.
l. 1. c. 12.

Fr. Hoffm.
m. m. l. 1.
c. 12.

Franc. Sylv.
de le Boe
tract. 6. §
251.

Franc. Hoffm.
man. m. m.
lib. 1. c. 12.

in the state. But this opinion being understood of Diureticks taken generally and indifferently, fails greatly: For there are Diureticks that are withal digestives, which by strengthening the ferments of the viscera do powerfully resolve the moribund excrements that they meet with in their way, do open obstructions, attenuate thick Humours, drink up acids, bridle the ebullition of the Blood, and by making the Urine absterfve expel the Tartareous Mucilage, such as are *D. Macbius's tinctura aperitiva*, *Spiritus Martis striat.* *Arcanum tartari soluti*, *Sal Martis aperitivum diureticum*, &c. These indeed may be given with great benefit, and may be born well by the Sick in any term of the Disease especially chronical, what is convenient being premised, and strengthening Cordials used between whiles: But such as are not of this sort, but do only plentifully eliquate the Urine, and have an attenuating faculty joyned with a watriness, especially the stronger hot ones, are not convenient till the matter be concocted or digested, and the impetus and fury of the moribund matter allayed: But the former may be good even when the matter is as yet crude, as *Galen* himself teaches, who before concoction gives a decoction of Smalledge and Dill, (*1 ad Glauco. c. 9.*) For they concoct the crude Humours, and make a separation of them from the mass of Blood, and expel them by Urine; they cause the moribund matter to follow Nature, and themselves emulate Nature. Whence also we see, that in Fevers as well continual as intermitting, after we have used them, the Urine that was crude becomes concocted, and the febrile heat and other Symptoms remit. Where yet we must note from *Galen* (*Meth. Med. c. ult.*) that if there be plentiful matter in the first ways, we may first use Looseners: in which case I also am of opinion that 'tis best to mix Diureticks and Looseners together.

Idem
ibid.

XV. Such Diureticks may be safely given to Infants, Children, Women that are with Child or are Lying in, as consist of an absterfve vertue from an alkali, and by their kindly acrimony incide and purge out the filth of the Urinary wayes, such as the stone of Perches, Crabs-Eyes, *lapis Judaicus*, *Nephriticus*, *Spongiz*, the Stones of Fruits and their ashes. Hot and dry Bodies are not long nor vehemently to be forced to Purge by Urine by hot Diuretick Decoctions, seeing from their use an Inflammation of the Liver, a Fever and an extenuation of the whole Body may follow. On the contrary, the fat, the cold, such as have a soft and loose Skin, and abound with a watry Humour and thin juices, are very fit to be purged by Urine.

Idem
ibid.

XVI. Those who use Diureticks in such as abound with crudities, for the most part hurt the Sick, because very often crudity does more in prohibiting than indicating: I say often, not alwayes, because whilst the Urine is detained in the upper parts and is altogether suppressed, although there be great crudity, yet nevertheless we have recourse to the most powerful Diureticks, such as *Cantharides*.

Sanctor. Met.
l. 15. c. 10.

XVII. We must never deal with Diureticks, especially such as are vehement, in passions of the Reins or Bladder that depend on much juice, before the whole Body be purged, and there be made the greatest revulsion by vomit that may be, and derivation to the intestines, and that is to be done by Medicines that are mild and are void of a malignant quality (not so far as that they have nothing of an attractive.) Because those which purge violently, do also provoke Urine and the Terms; and even upon this account cause Abortions, as justly seemed to *Averroes*. For if while the Body is full of bad juices a Diuretick be given, and that be weak or moderate, it will certainly cause the excrements to flow together towards the ways affected, and to be heaped and crammed up there, by which means they will be the less apt to go forth:

And if a violent one be given, so that it is able to break through this stoppage also, the same will also have the power to exulcerate, whereby it will exulcerate the Stomach and Intestines before it come at the place affected, and so will irritate both the upper and lower part of the Belly, and also by the pain that it causes will call excrements to the Belly; and it will come to pass, that what was given as a Diuretick, will by accident act the part of a Vomit or Purge, but with great mischief to the Patient, seeing it does not Purge by an attractive faculty, but corrupts by an exulceratory.

Vallef. l. 5.
Epid. p. 480.

XVIII. After the tryal of Medicines of all sorts for 29 years, I have hardly observed, that Diureticks, which quickly pass through by Urine, do evacuate excrements more than usual: And let the Readers know, that there are no Medicines which so purge by Urine, as there are that purge by stool. Because that is said to be Diuretick which moves by Urine, I see not why a Diuretick should carry with it such things as ought to be Purged: For Mineral Waters are called Diuretick, because they themselves pass; nay there are rarely found Diureticks which are altogether and wholly evacuated by Urine: For if any one drink ten pints of Mineral Waters, and there pass out by Urine, nine or ten pints, such will be esteemed very good Diureticks: but we say not so of purging Physick, because half a scruple of *diagridium* will evacuate an Hundred scruples and more of excrements. The same we say of other things, for the smell of *Asperagus* passes by Urine, but it carries little or nothing with it of other excrements; yea the Spanish Fly that provokes Urine the most strongly, causes heat by driving forth only a few drops of Urine, and not any great quantity of it or other excrements. It would be indeed a great happiness if such Diureticks were to be had in the Shops, as would evacuate by Urine not only themselves, but more or other excrements contained in the Veins, because they would expediently overcome all those evils that are contained in the Veins.

Sanctor. Art.
parv. c. 89.
partic. 84.
& cap. 94.
partic. 7.

XIX. The continued use of Diureticks, as if they be taken Morning, Noon and Night, doth encrease their vertue and efficacy.

Joh. Walzrus
m. m. p. 71.

XX. Diureticks ought not to be mixed with meats. I do not indeed reject Pottage of Roots, Herbs and other aperitives, but yet they must not be sapt at Dinner, but an hour or two before: for if they be mixed with other meats, it is to be feared they will hurry the undigested chyle along with themselves. How great their vertue is, *Pigraus* (*lib. 10. cap. 20.*) speaking of the Spaw-Waters shews, viz. that they hurry along with them whatsoever they meet with, even Anniseed commits themselves whole. A Citizen of *Friburg* being taken with a stoppage of Urine, and suffering great pains for some dayes, and having taken many things in vain, at length, having first purged, took Crabfish stamped with Winter Cherries, whereby Urine was so provoked, that the stones of the Winter-Cherries were expelled with this Urine, and that not without the greatest pain and torment.

Fab. Hilda-
nus Cent. 3.
obl. 72.

XXI. We must note concerning the cold Seeds, that their Diuretick vertue resides most in their husks, for the pulp doth moisten and nourish.

Heurn. Meth.
ad prax. l. 1.
p. m. 110.

XXII. We must learn from *Galen* that when our intention is to provoke Urine, the Remedies are to be taken with Sugar or Honey: Therefore *Aclepiades* saith, that a Remedy of Cichory or Endive (prescribed on account of the Liver) provokes Urine because it is made up with Honey: The same we may think of Sugar.

Saxon. prax.
lect. pract.
part. 2. cap.
23.

XXIII. I will open the safest way to use *Cantharides* by infusion: Let a scruple of *Cantharides* being powdered be infused in three or four ounces of Rhenish Wine or Brandy, and let it stand in Infusion for some dayes, then filtre it through brown Paper that nothing of the substance of the *Cantharides*

des

des be mixed with the Liquor: Mix one spoonful of the strained Liquor in seven of Wine or Beer; and of this mixture give to drink the first day one Spoonful, the second two, and so on. In a virulent Gonorrhoea, suppression of Urine and the Stone, Mr. Dr. Jac. Franc. Kotzoe found a good success of this prepared Potion. Chymists write truly, that Salt is the chief Diuretick, hence *Cantharides* most powerfully provoke Urine, for they are endued with an acrimonious volatil caustick Salt that is meltable in the Urine, which being received into the Vessels does therefore so stimulate in the Reins and Bladder, as both to erode, and cause a Bloody Urine.

XXIV. Volatil Salts being taken for continuance, even together with meat, bring Phlegm down to the Kidneys, and carry it out with the Urine; inasmuch as they not only incide and correct glutinous Phlegm, but drive forward part thereof to the wayes of Urine, and expel it in the form of sediment, which yet falls in the Urine by little and little, and in that very respect yields an undoubted sign that the greatest part of the Phlegm is corrected and overcome: Which I would have to be taken notice of here for the sake of the Juniors, because there are some Seniors, who being less versed in the preparation of the more powerful volatil Salts, and therefore also less accustomed to observe their virtues, do make slight of them not without some suspicion of envy: Thus many find fault with those things they do not understand, nor will be at the pains to learn.

XXV. Let Tartar with its off-spring carry the Bell amongst Diureticks, and let it be of the choicer sort, and as if it had been crystallized of it self: what hinders why it should not be given washed only, (as we have long and securely used to do even with the shining red) without any depuration (invented by some Mens too great officiousness) which manifestly carries away the most subtil part (as the remaining water that serves for the solution of many things teaches) but not wholly the arenosities: or if any fear some feculency (which yet is very full of volatil Salt) let him depurate it only once and that warily, (as it commonly comes under the name of *Acidum Tartari*) without the vain affectations or separate repositions of the white, cream or crystals (that are indeed indifferent.)

XXVI. The Roots of crude *Asarum*, though they cause Vomit with great anxiety; yet being boiled in water and not in Wine, they are changed into a deopillative Diuretick and a Remedy for slow Fevers, which shews that there is an aroma hid therein: To this as to the only Remedy, did *D. Obeimius* fly in long continued Fevers that depended on inveterate obstructions of the Hypochondres.

XXVII. Now amongst Diureticks I observe that two sorts are recommended by Authors, some more gentle that bring no force upon the Body; and others more violent, which finding no noxious Humours in the Body to act or put forth their vertue upon, or that may also blunt them, do bring harm to the Body, yea expel pure Blood (and sometimes the Soul with it) together with the Urine; and therefore these are dangerous and suspected by me, and I think we should neither use them rashly nor often. Amongst these are first the *Scorpion*, the ashes whereof, being burnt, are given in Wine, even according to the Ancients, to provoke Urine. Secondly, *Hog-lice*, whose juice they give pressed out with Wine. Thirdly, *Cantharides*, whose use is frequent enough in a virulent Gonorrhoea (See their preparation § 23.) Fourthly, May worms that are black, very stinking and powerfully provoke Urine in the Feet-gout.

XXVIII. But we must note that these latter Diureticks are not so proper for bringing out by Urine Humours abiding in the Blood or elsewhere, as for expelling the Urine already separa-

ted: so that the gentle Diureticks are more universal and to be used in all cases; these latter more particular and more proper in some certain Distempers: These latter, inasmuch as they sometimes drive forth pure Blood instead of Humours from the Blood, or offend otherwise, are deservedly reputed dangerous Medicines, and therefore not to be used but with great, continual and prudent caution: yet they may be sometimes (but prudently) used where the more gentle have been given in vain, and where a great malady urgeth; always attending to the effect, which as long as 'tis good, their use may be persisted in, but as soon as the least hurt is observed, we must cease from their further use.

Emmenagogues, or provokers of the Terms.

(See *Mensium suppressio* Book XII.)

The Contents.

They either respect the wayes. I.
Or the coagulated Blood it self. II.
Or they promote its rarefaction. III.
Or they stimulate and do both. IV.
Or they restore the Blood it self. V.
They are not to be given to Women with Child. VI.
They are not to be given to all indifferently. VII.
The order to be observed in the use of Remedies. VIII.

I. Medicines provoking the Terms respect either the wayes, which namely ought to be free in all the microcosmick Common-wealth, such as are both all Aperients, except the acid and nitrous, which namely are contrary to the other intention, unless the same be so directed that under the dominion of others they may assist the action of the same: Baths also do greatly help here, which both by their gentle heat and their notable vertue to moisten, do very well open the passages: Likewise suffumigations that loosen the Pores and draw away mucus, belong hither; as for example, *Timaeus* in his Counsels commends the suffumigation of *Coloquintida* received into the Womb by a Funnel, which Remedy takes place after Bathing. And therefore by experience your *Emmenagoga* denote nothing else but specifick uterine Aperients.

II. Or they respect the Blood it self, the state whereof as the Terms do in a special manner shew, so do they altogether follow the condition thereof. Now those are notable *Emmenagogues* which promote the motion of the Blood; which in specie they do two manner of wayes, either first they take away the impediments that fix as it were and coagulate the Blood, which are two, acid Humours and Phlegmatick, or coagulated Serum: amongst these are Martial Medicines (for instance) *Crocus aperitivus Sulphuratus*, with Salts, *Quercetan's* Cachectick powder, his Stomachick powder: yea some give the infusion of the crude filings of Steel or Gold with the same intention, that they may absorb and repress the constringing acidity: but those Steel-Remedies are best that have withal a faculty to moisten, as the tincture of Steel pomated or cydoniated, which are excellent; the tartareous tincture of Steel, and the like, that at the same time both the driness may be respected, and the deficient fermentation of the Blood promoted, and others that liquate, fuse, resolve and attenuate the coagulating Serum or Phlegm, such as are bitter things and others of thin parts.

III. Or

Tho. Barth.
Cent. 5.
Obf. 82.

Wedel.

Franc. Sylvi-
us de le Boe
pract. lib. 1.
cap. 34.

D. Ludovici
pharm. 386.

Frid. Hofm.
m. m. l. 1.
cap. 12.

Sylv. de le
Boe m. m.
l. 2. c. 12.

III. Or *Secondly* they promote its rarefaction, and singulare, that upon the excitation and exaltation of its Sulphureous and volatil Saline particles, it may become the more active, and losing its sluggish lentor or clamminess may take up more room in quality and motion; to which belong all Balsamicks, volatil and mean, as well Sulphureous, for instance, Saffron, Myrrh, Bay-berries, Savin; likewise the distilled oyls of Savin, Cinnamon, Balm, Saffron, &c. as Saline, fixed and volatil Salts, the tincture of Tartar, Borax, salt of Mugwort, of Salt and Vitriol, &c. the Spirit of Sal Armoniack, Harts-horn, the volatil Salt of Amber. Hence is this practick rule appropriated to both intentions, *Those things that provoke urine, do for the most part also provoke the Terms.*

IV. Or they both stimulate and rarefie: and hither belong even Purgers themselves, inasmuch as they do not only attenuate and bring out the antecedent cause, viz. viscid and clammy Humours, and so open and respect the ways; but also help the rarefaction and fermentation of the Blood, so that the flux returns on the very day whereon the Purge is taken. And amongst other things Aloes also helps here, whence *Frid. Hofman* relates that he had a Maid, whose Terms could be no other ways promoted, but by the use of *pil. Ruffi*.

V. Or they restore, and recruit the Blood it self, and so make it fluxile, whither belong Restoratives and a full Diet; for it would be absurd, if it fail in quantity, to promote its motion. Hence as women have a more serous and fluxile Blood, namely such as is apter for turgescency, and on this very account acquire a serous Plethora; so we must also wholly provide for this.

VI. Emmenagogues are not to be given to women with Child, whence they are always warily to be prescribed to those we suspect for whores, when they complain of an obstruction of their Terms: for though, unless when there is a disposition to abortion, they often drink the decoction of Savin, &c. in vain, yet in a doubtful case we must not ascend above Steel-Remedies and moderate Aperients. Neither are too hot Medicines to be given to Women with Child, such as heighten the rarefaction of the Blood: for as Women with Child through such preternatural rarefaction and fermentation, or being seized upon by burning Fevers, use for the most part to have their Terms preternaturally, and consequently to suffer abortion; so we must much less intend that by Medicines, which also is the very reason why Purgers are not so convenient.

VII. Aperients alone, or provokers alone are not to be used indifferently: Physicians often err egregiously who give Term-provoking decoctions, yea the distilled oyls of Juniper or Savin, the Spirit of Sal Armoniack and the like all day long and indifferently, thinking these to be Specificks, whereas those are chiefly to be esteemed for such which satisfy this or that more special intention.

VIII. 'Tis therefore the best to begin with Aperients, and to subjoin Provokers or drivers, both internal and external: Hence for a week or two before the accustomed time, are wont to be given Aperients, moisteners, digestives, preparers; yea Purgers themselves and Blood letting, upon which the hinge of the matter turns, are not to be made use of at another time; for if they be, the whole curation will be to no purpose and ineffectual.

G. W. Wedel, de C. M. fac. p. 185.

Frictions.

The Contents.

Whether they be convenient when a crude juice abounds. I.

They are suspected in hot and cold Diseases. II.

Whether they evacuate all the Body. III.

Scratching supplies the place of Friction. IV.

I. Friction or chafing may seem to some to be inconvenient for those in whom is heaped up a plenty of crude juices, because * *Galen* writes, that those who have but little good Blood, and abundance of crude Humour, must neither be bled, nor purged, nor must they use exercise or bathing; and therefore neither friction, seeing it also moves the Humours: and because he forbids bathing, which hath the same virtues as friction, seeing both draw towards the Skin. *Galen* also in * another place, in the cure of Fevers that arise from obstruction, forbids to cleanse the Skin before the evacuation of the whole Body, lest a crude abster-sion draw to the Skin, whence there will be a greater obstruction of the pores; which same thing will happen upon friction. But *Galen* is indeed of a contrary opinion: for (*in lib. de f. m. c. 6.*) he says thus of this affection, that those who are so affected are not to be evacuated by Bleeding, but by frictions and indifferently heating unctions, &c. And 12. meth. c. 3. he cures those who fall into a swooning through the abundance of crude Humours, by much and strong friction of the whole Body: yet he denies bathing to the same persons, which though it have the like virtue as friction, yet differs there from in that it rather melts the Humours, than incides and attenuates them; whereas friction does the contrary. Hence it comes to pass that bathing causes fluxions, those Humours flowing which are melted; I say it causes a distribution of crude Humours, which friction does not do, as attenuating more than melting: wherefore where there is need of moistening, *Galen* uses bathing rather; and where of opening obstructions, friction rather. But friction also draws towards the Skin, wherefore it will also encrease obstructions. I said, that friction as it draws, does likewise attenuate: and seeing it draws less than bathing and extenuates more, it is the far more profitable of the two in this affection: and besides what is already said, if by chance it should cause something of obstruction by extracting the crude Humours, that might be amended by anointing with some oyl that is moderately heating and con-cocting: so that friction and unction ought to be used by turns, but not bathing at all; as also neither Exercise, because it causes a distribution of crude Humours from the inmost parts. In Fevers that spring from obstruction, we abstain from cleansers of the Skin till we have evacuated the whole, because in that case the obstruction of the Skin is a great part of the malady, and such as ought to be removed before the Fever it self, and in the mean time we may use great evacuations: but in this affection we speak of, the evil is least at the Skin, for it has its seat principally in the viscera. Swooning hinders great evacuations to be used; and therefore we are glad to fly to frictions.

II. Frictions, in hot and acute Diseases, such as the Pleurisie, have always been suspected by me; for 'tis certain that the Blood and Humours wax hot thereby, are rendered more Acrimonious and therefore rush with the greater violence to the part

Vallef. l. 1. c. 7. contr. c. 7.

part affected. In cold Diseases, as Apoplexy, Epilepsie, Palsie and the like, they may seem to have place; but because thereby the Blood and Humours wax hot, and like a vehicle carry the crude and cold Humours to the part affected, we must use them warily, especially in the beginning of the Disease, and while the matter is yet in fluxion.

Fabr. Hild.
Cent. 5.
Obs. 30.

III. *Galen* (4. *aph.* 2.) teaches plainly, that by much friction the whole Body is not diminished nor evacuated: Yet it is most true that as to the external parts and such as are next to the Skin, the whole is exhausted, as far as the virtue of the friction can reach, as the same person hath explain'd himself 14. *meth.* c. 7. and *Hippocrates* himself (6. *Epid.*) where he hath written, that friction, in a great compass, doth heat and dry the Body, and thereby empty the Spirits. And indeed seeing the Veins and Arteries are heated by it, and thereupon an heat is both excited and called out by little and little, we must hold that the whole Body is evacuated, at least by accident. Therefore when *Galen* denies that the whole Body is diminished by friction, he means, not in that manner as Purgers evacuate, in comparison whereof he there speaks.

Rub. in cap.
14. l. 2. Celsi.

IV. Scratching is profitable for many Diseases, for it calls out to the Skin from the viscera and diffuses thence: in short, it is as beneficial as hard friction.

Valles. in
Epid. p. 686.

Glands, or Suppositories.

The Contents.

Their too great length is unprofitable. I.
They empty not from the Guts only. II.

I. IT is to be noted that it is unprofitable to make Suppositories so long as they are commonly made, seeing they irritate not the expulsive faculty save only in that part where they touch the *podex* or extremity of the Arse-gut: therefore 'tis better to shape them shorter, and about as thick as ones Finger.

Mercat. ex
Rondeler.

II. If Suppositories be made of the stronger Medicines, they may evacuate even out of the Mesaraick Veins, yea out of the whole Body: for experience witnesseth this, by which it is manifest, that Suppositories made of Hellebore have had the same operation as if it had been taken inwardly by the Mouth.

Grumos solventia, or dissolvers of congealed Blood.

The Contents.

They respect either the hindered circulation of the Blood. I.
Or the coagulated Blood it self. Acids dissolve concretion. II.

I. Dissolvers of clods of Blood are of a middle nature as it were betwixt Diaphoreticks and Diureticks: for here we apply *H. Saxonia's* Rule who * says, Those things which mollifie the stone, the same attenuate clods of Blood. For as the very grumefaction supposes 1. Blood extravasated, that is, slid for a certain time and space out of the Vessels,

Prælect.
pract. part.
l. 2. p. 38. § 3.

(its circulation being hindered) whether that be *in fieri* or *in facto*, (that is, whether the Blood be but now a sliding, or be already slid) 2. Blood ready to coagulate, inasmuch as without its proper element and sphere it putrefies, corrupts and remains unmoved: so those things which loose and fuse it when concretion, so that it may either be received again into the Veins, or if it be no longer capable of returning to its former state and nature, it may be dissipated and evacuated, I say those very Medicines do perform their operation two manner of wayes chiefly: for they respect either 1. the hindered motion and circulation of the Blood, whether it rush of its own accord into some certain and definite weaker part, as in Inflammations; or by the breaking of the Vessels and some outward hurt it be thrown out of the Vessels and be collected somewhere: And of this sort are all Diaphoreticks in a special manner, as well volatils, that enjoy a thinness of parts, which make the Blood more fluxile, and cause it to return into order by quickening its motion and making it more subtil and rare; as Balsamicks, Myrrhe, Zedoary; and likewise fixts, as antimon. diaphoretic. hence the tincture of Bezoar, the Spirit of Harts-horn, *mistura simplex*, antimon. diaphoret. Zedoary, opium, &c. are excellent in this case; and bring present help. And these profit likewise in the former case in all kinds of Inflammations, of the Pleura, Liver, &c. new wounds, in new falls from on high, imposthumes that are a breeding, &c. in regard by this means the coagulation and concretion it self is hindered, and is destroyed in the blade as it were; for as soon as the circulation is reduced into order, a collection is no longer to be feared.

II. Or 2. the coagulum (or coagulated Blood) it self being now of a greater consistence, and finished as it were; whither belong divers resolvers ranked under Nephriticks, whether Sulphureous, as *sperma ceti*, which is a notable solvent, & in this respect is excellent in an Asthma, or Saline, & of these, both 1. Acids, such as are simple Vinegar and Vinegar of Squills, oxymel scillit. the juice of Lemons, Spirit of Vitriol; And so our Thesis stands unmoved, Acids resolve coagulated Blood; whence it may peculiarly be here noted (to discuss these things more thoroughly) that Acids are not so proper in the first degree, to wit while the Blood is extravasating or rushing somewhat with a Rheumatism, unless by a secondary intention, and under the Dominion of Volatils, for then they more promote the coagulation, which they commonly call repelling; as in the second, where the extravasation or coagulation is already made: and also 2. Alkali's and Alkalines, as Crabs-eyes and other Diureticks and Lithonripticks, and those Herbs which for this very Alkali are called Traumaticks or Wound-herbs, and their juice, decoction, essence, &c. Whence the reason is clear why in the Pleurisie, according to *Helmont* himself, the same are accounted specificks which are otherwise good for coagulated Blood, namely that the matter may be so far resolved as that it may be expectorated: These things are good in falls from on high, whence *pulvis ad casum Augustan.* is famous: So also Goats Blood, to say nothing of Crabs-eyes, is an Antipleuritic, dissolving clotted Blood and the stone, chiefly through the volatil Salt that it is furnished with.

Gr. W. We
del. de f. m.
sic. p. 187.

Cccc

The

The opening of the Hemorrhoids.

The Contents.

- How the latent Hemorrhoids may be called forth. I.
 The opening of them in Children and Yonths is unprofitable. II.
 Leeches rather draw from the Arteries than Veins. III.
 Leeches may be used when they are newly caught. IV.
 They may be set on with ones hand only. V.
 Their Tail is not always to be cut off. VI.
 They are not to be pulled off by force. VII.
 They leave no malignity behind them. VIII.
 The mouths of the Vessels are to be sought, that they may be set upon them. IX.
 They sometimes drain Blood from a great depth. X.
 They draw the thick also. XI.
 How they are to be got out when they creep in at the Arse hole. XII.
 Whether Nature should be accustomed to a flux by applying Leeches. XIII.
 Which Hemorrhoids (the internal or external) be to be opened. XIV.
 Such evacuation agrees not alike to all Countreys and Natures. XV.
 Whether they are to be opened in affections of the Womb. XVI.
 Whether to be opened with a Lancet. XVII.
 Whether they draw any thing from the Spleen. XVIII.
 How they profit in malignant Fevers. XIX.

Zacut, M.P.
 pag. 6. prax.
 admir. l. 2.
 Obs. 83.

Foreis con-
 sult. 8.
 Cent. 3.

Barbette
 Chirurg. part
 1. cap. 17.

Heurnius
 tract. de hi-
 rud.

Idem.

I. **O**ne being troubled with the Pain of the Hemorrhoids by Intervals, and having them always cease at the expulsion of the black Blood, through defect of this evacuation fell into a melancholy. When no Remedies could provoke the retarded evacuation, and Leeches had been thrice applied in vain, as sucking only from the external Veins, I coming advise to set them on again; but first to set on a Cupping glass that might comprehend the whole anus. This invention was of that moment, that the orifices of the Veins that lay hid within, strutting out, there followed a large flux of Blood, whereby the offending Humour being evacuated the Patient was recovered.

II. The Hemorrhoidal Veins in Children and Yonths, as being slender and not yet widen'd with melancholick Blood, if they be open'd, are wont to send forth but little thick Blood.

III. 'Tis worthy observation that Leeches draw more Blood from the Arteries than the Veins, and therefore they ought to draw forth the less.

IV. Some cleanse Leeches newly caught from their filth with a Sponge or course cloth, and throw them into very pure water; which they change often, and for nourishment put in a little Sugar: But I have learned by Experience, that if they be squeezed a little presently after they are caught and be cleansed from their *sordes* or filth in warm water with a Sponge, they have been wholly hurtless without any more ado, and have caused no other Symptoms: supposing that they be taken out of pure waters, and be not virulent.

V. Some put them in a hollow Cane or Reed, or a long Glass, so that the head only may stand out, and so set them on; but because this way is more troublesome, and often succeeds not well because of their slipperiness, and the sometimes thicker, sometimes slenderer extension of their Bodies, it is better and easier to hold them in a cloth, and set them on with your hand.

VI. Note, that 'tis not always necessary to cut off their tails, because when they are applied to any larger and more eminent Vein, as to the Hemorrhoidal, Jugular, or to the larger vessels of the

Arms and Legs, they may so open them by their bite and attract the Blood, that after their fall off, when they are filled, the Blood may continue to issue out so plentifully, that there may be sometimes need to stop it with Plasters.

VII. After they have sucked Blood enough, unless they fall off of their own accord, sprinkle ashes or salt on their head, which having tasted they will presently fall off: But they are not to be snatcht off by force, lest they leave their heads (that are affix'd) behind them, which may be the cause of incurable Wounds: which thing, as *Pliny* relates, happen'd to *Mesalinus*, a Roman Senator.

VIII. *Avicen* and others would have a Cupping-glass set upon the bitten place, and a little Blood drawn therefrom, that the malignity of the bite may be corrected: But because our Leeches seem to have no such malignity, there is no need of such setting on of Cupping-glasses: In the mean time he that for the greater security will wash the bitten place with salt water or vinegar, let him. I can testify I have several times applied them, and after their falling off have perceived no mischief or virulence, only an itching which went off in a little time.

IX. If they be to be applied to the Hemorrhoidal Veins, first let the Fundament be fomented with a decoction of Mallows, Chamomel and other Emollients; and then let the place of the Hemorrhoidal Veins be chafed, because by that means the orifices of the Veins will appear, to every of which let a several Leech be applied. (How to make the Veins appear, see §. 1.)

If the Blood sucked by the Leeches appear sometimes subtil and ruddy, as I have often seen it, I think this happens through the error of him that applies them, who set them not upon the mouths of the Veins, but upon the edge of the anus. 'Tis necessary to turn the anus a little inside out, and by Cupping-glasses to draw the Hemorrhoids outwards that you may see them, which is not known to all that apply them. Now I know they have been rightly applied when the Leech being cut with a pair of Scissors pours forth much thick black Blood; but if it be ruddy and thin, I know that he that set them on has mistaken: But if after the thick is drawn out, the thin follow, 'tis well enough.

X. The Greeks, *Galen* and *Oribasius* say that Leeches suck only the Blood contained in and next under the Skin: *Avicen* and the Arabians say they draw it deep out of the Body; & determine that the extraction of Blood that is made by them is deeper than the extraction that is made by Cupping glasses. But these Authors may easily be reconciled to one another, if the place to which the Leeches are applied, be distinguished: For if they be applied to the larger vessels in the Arm, Forehead, Legs, or to the strutting Hemorrhoids, we see that the Blood is sometimes so largely evacuated, that Causticks and Emplasticks are necessary to stop it, and there sometimes follows a Cachexie and Dropsie: Now it is certain that so much Blood must needs flow from the whole Body. But the matter is otherwise if they be applied where the Veins are not so wide, but slenderer and lying just under the Skin.

XI. Some think they attract only the cutaneous Blood, leaving the thicker, (as *Mercurialis*) because the Wound that is made is so small that the thinner part only can pass out. But from *Zacutus* (*Lib. 1. Hist. Princ. 4.*) it appears he was greatly deceived; for besides that the Ancients used to set Leeches on the Part affected, in Diseases springing from a thick Humour, the hole made by them (especially by the larger) is so large, that the thickest *Sordes* may flow out by it, and there often happens a plentiful Bleeding, to stop which there is sometimes need of astringent Remedies.

XII. A

XII. A man desiring Leeches to be applied to his *anus*, one slipping out of the Surgeon's Fingers entred a good way in at the Fundament: I commanded to be applied to the *anus* dry Ox-dung, indifferently hot, sprinkling first the Powder of Wall-lace upon it (as also very good Castor) by the fume whereof, and by a Clyster made of the juice of Onion alone, the Leech was voided with the Excrements half dead.

Zacut. l. 1.
Obf. 7. Hist.
Princ. Med.

XIII. Whether are Leeches to be applied to the Hemorrhoids, and Nature to be accustomed to discharge her self by this way? *Sennertus* (*Lib. 3. Pract. Part. 2. Sect. 2. c. 12.*) handles this question elegantly, and cites chiefly *Vidor Trincavellius*, who (*Pract. l. 9. c. 14.*) dissuades from this operation, because none of the Greeks or Arabians have mention'd it; and because *Galen* (*4. Aph. 25.*) does plainly advise, not to accustom our selves to an evacuation by the Hemorrhoids, because it is not without danger: if black Humours flow, the evacuation may indeed be profitable; but if thin and clear Blood, or in a greater quantity be expelled, it is unprofitable: As *Trincavellius* writes that he has observed, that the Blood drawn by Leeches out of the Veins of the *anus*, is commonly bright not black, especially when those Veins do not swell of their own accord, or first are painful. But *Aquapendent* resolves the contrary, affirming that in those who have never had any Flux of Blood by the Veins of the *anus*, nor had them swelled, yet an evacuation by setting on Leeches ought to be tryed, namely in the Melancholy, Pleurisie, Head-ach, Fevers, distempered Spleen, faults of the Kidneys and many others. *Aquapendent* confirms his Opinion, 1. By the Authority of *Galen* (*4. Aph. 25.*) who writes that Blood expelled above, what such soever it be, is bad; but below and by the Hemorrhoids, good, when Nature has heaped up much such Blood; namely if the evacuation be moderate and be born well: 2. By Experience, which shews that Nature does often thereby free the Body from many Diseases, and that she ought to be imitated: 3. Those Vessels are naturally framed for this use, that what hurtful thing abounds in the Body, may be evacuated by them: 4. That an evacuation made by Nature or the Physician, as often as hurtful matter is present, is good and not to be disallowed: 5. That if one might not take away melancholick Blood by the Hemorrhoids, then neither should a Vein be opened: 6. That Nature is the curer of Diseases, and so to be imitated, and we often see her to open these for evacuating superfluities, and therefore that 'tis very fitting to attempt the same by Art.

Hernius.

XIV. In the mean time it is much to be heeded, which Hemorrhoids are to be opened by Leeches? and what Humours offend or where? For if the Humours offend in the *Vena cava*, it is more fit to open the external Hemorrhoids, though they used not to bleed before, if so be they swell: Yet the same may also be opened, if they swell, or used to bleed, although the vicious Humours lurk in the branches of *Vena portæ*, viz. because of the consent and inoculation of the internal and external Hemorrhoids; though then, if it can be conveniently done, it is more profitable to open the internal, whether they swell or not, for the reasons produced by *Aquapendent*: But let not the external be opened unless they swell, seeing Nature endeavours not to expel any thing this way. ¶ But has the distinction of the internal and external Hemorrhoids a foundation? Yea verily: If you would take away thick Blood from the hemorrhoidal Veins, so that the *Vena Portæ* may be unloaded, apply the Leeches towards the Rump-Bone, and more towards the inside of the Arse-gut: if you think upon emptying the *Vena cava* only, you shall draw Blood from the sides of the *anus* and towards the *Perineum*, and superficially.

Riolan. An-
thopogr.

XV. Yet in the mean time the difference of Natures and Countreys is to be consider'd here, as *Aquapendent* admonishes: For the opening of the Hemorrhoids is celebrated in Italy and the Southern Parts with greater benefit, because the Inhabitants thereof have a more hot and adust Blood; and therefore they are more subject to the flux of the Hemorrhoids than Northern People, whose Blood is colder and the Hemorrhoids less familiar: Though experience proveth that here the blind and swelling are frequent enough, especially in them that are subject to hypochondriacal affections and the Scurvy, which therefore it is necessary to open for the evacuation of the feculent and melancholick Blood that falls down toward the lower Parts.

Idem.

XVI. It is to be observed that the Womb has great consent with the hemorrhoidal Veins; because upon the retention of the Terms and Childbed Purgations these Vessels swell very much: Yet that they are not necessarily to be opened in affections of the Womb, appears, because the Blood redundant in this part may be discharged by proper Vessels, and that far more safely; for although those Veins may be easily opened, yet they are hard to be clos'd again: And if the Childbed Purgations succeed not, they may be evacuated by proper uterine Purgers.

XVII. *Zacutus* (*l. 3. Pract. Admir. Obf. 39.*) diligently admonishes us that the blind Hemorrhoids, the painful, the swelling and inflamed are in no wise to be scarified, lest incurable and fistulous Ulcers follow: Neither are they to be opened by Phlebotomy, lest there follow an irreparable flux of Blood, carrying a man off quickly: Bringing the Example of a melancholick young man, and of *Dod John of Austria* Son to *Charles V. Emperor*; both of whom having their Hemorrhoids opened with a Lancet, and a large flux of Blood following, died within a few hours: And commending Leeches as safer. Yet some famous Physicians are not afraid of opening them by a Lancet, amongst whom are *Massarius*, *Sylvius*, *P. Argellata*, *Matthæus Martini*: Yet the Lancet, as also the incision made by it must be very small, lest there happen a larger evacuation of Blood than is agreeable to Nature or can easily be stanch'd. *Severinus* prefers the hooky prickle of the Fuller's thistle, to which a piece of a leaden bullet is fitted, that it may be thrust in the more steadily.

Hernius.

XVIII. That we may not always open them in Diseases of the Spleen, will thus appear: In Diseases of the Spleen, we draw the Humours either out of the bowel itself, or out of the neighbouring Vessels: If out of the bowel, then the opening of these Vessels is in vain, for they have valves that hinder the flowing out of the Blood of the Spleen: whatsoever Blood is drawn out by these, it all comes from the *Cœliack Artery*, and nothing from the Spleen: But if we have a mind to empty from the neighbourhood, in like manner the opening of these Vessels does not always profit, for there are three sorts of Melancholicks; The first abound with that thick and sad juice all their Body over; The second have lost their appetite, and the last have it: In the two former because all the *ramus splenicus* and *Cœliack Artery* are obstructed, no benefit is had therefrom; but the last do often find much relief, for when these Vessels are opened, the *Cœliack Artery* may discharge by them its abounding Blood, and so the Spleen may be lighten'd. *Waleus m. m. p. 86.* Who thence infers, that in these last Melancholicks they may indeed be open'd, but without all necessity, for one Vomit, he says, can do more than ten times opening of these: But seeing Nature does often of her own accord unlock the Hemorrhoids with advantage to Health, why may not Art also in imitation try the same thing? for Nature by opening these, uses to deposite by them the scum of the Blood, as if a Purge had been taken, which returning by intervals preserves not only from melancholick

CCCCZ

lanchoick

Wofnan. m.
m. l. i. c. 16.
p. 242.

Rolink. de
febr. p. 274.
See §. 3.

lancholick Diseases, but others also the most dangerous. It cures an hardened Spleen, 6. Epid. 6. 8. dissolves Melancholy, 6. Aph. 11. 21, 22. and all abundance of Humours is purged out by its vertue.

XIX. In continual and malignant Fevers, *Aquapendent* says, an evacuation by the Hemorrhoids does more good than bleeding in the Arm, because the larger branches of the *Cava*, in which the offending matter sticks, may thus be emptied: I add, that whilst they draw from the Hemorrhoidal Arteries, 'tis very like that the Heart will be wonderfully helped thereby.

Hepaticks, or Medicines for the Liver.

(See *Hepatis affectus*, or Diseases of the Liver.)

The Contents.

They respect either its Vessels, Ducts and Pores; I.
Or the Choler; (which is either to be restored; II.
Or temper'd: III.)
Or its tone. IV.
What and how sweet things help. V.
How Steel-Remedies profit. VI.
The too much use of Aperients is hurtful. VII.
Astringents have not place always. VIII.
The abuse of Syrups hurteth. IX.

I. **H**epatick Remedies respect either its vessels, Ducts and Pores, in the concrete, respect being likewise had to the Lymphatick Vessels and Gall-Bladder; or the Choler, which it separates and transcolates; or its tone, fibres and parietes or Parenchyma. Aperients do chiefly respect the Ducts, for this Bowel is principally and above all others subject to Obstructions, because of the very numerous Vessels that it has, so that the chief Hepaticks are Aperients. Hither belong also Diureticks, which, unless there be withal an over dry intemperies, or if there be, such of them as are more dilute, are most agreeable to the Liver. Thus to repeat only a few, 1. Bitter things are profitable that cleanse, cut and attenuate the clamminess of the choler: 2. Others of thin Parts, whether Aromaticks, as *calamus Aromaticus*, Spicknard, &c. or Acids, as red Liverwort, Mineral Spirits: 3. Absorbents, Lixivials and especially Steel Remedies: And these have a notable use in Obstructions, in a too mucilaginous choler, Jaundise, Dropsie, Cachexie, and the like.

II. Moreover those that respect the Choler, do either restore it, if it be sluggish and defective; or bridle it when it exceeds and is impetuous, lessen it when it abounds, and mitigate it when it boils and burns as it were. Those that restore the Choler are, 1. Partly contrary to those that restore the Ferment of the Stomach, and are for the most part the same which encrease the heat of the Stomach, namely Sulphureous Balsamicks, as all Aromata or Spices, likewise spirituous as Wine and its Spirit: 2. Partly the same, being endued with a volatil and simple, and with an oleous acrimonious Salt, as Mustard, *Erysimum* or Hedge-Mustard, Water-creffes, which are like a spur to it: for Choler consists chiefly 1. of Oleous, Sulphureous, Balsamick Parts; 2. of volatil Saline, both which are immersed in a little watry mucilage, and limited with watry Particles: Hither belong also sweet things, which encrease choler, and that by contributing partly mucilaginous clammy parts, whence also the same are said to breed Obstructions; partly Sulphureous also, if they happen upon an hot and dry Body: And these are good in an *Anasarca*, as also partly in an *Ascites*, a serous Ca-

chexie, loose Tumours; and where in other cases there is need of rarefaction of the Blood, for such things as then more intimately rarefie, the same do exalt choler: They likewise profit the Phlegmatick that have no gall as it were.

III. Having hapned to mention sweet things, we must see why *Galen* 8. de Comp. Med. 1. 1. writes that Raisins are familiar to the Liver in their whole substance; and why the same thing is not equally attributed to sugared things. That familiarity of Raisins with the Liver gave foundation to the Electuary of Raisins in *Riverius* that notably strengthens the Liver: The reason may be, because they temper the fluxility and sluggishness of the choler, and kindly moisten withal, which sugared things do not do.

IV. And the choler is temper'd and bridled when it exceeds, both by accident, by certain openers, as Preparations of Succory: (where note, that some things are called coolers, which yet are hot, as we may see by these mention'd, inasmuch namely as they loosen the stoppages and cleanse gently withal, partly evacuating Cholagogues;) and also per se, by 1. Diluters; thus when choler offends, the Whey of Goats Milk with a little Cinamon, &c. is good, whether the anima of Rhubarb be taken with it, or the elyxus of Antimony be dropt into it, both which I use with success: hither belong mineral Waters, Potions, &c. Now these very Diluters are a vehicle to Aperients; whence note that in the Jaundise such Aperients as dilute more, and in the Dropsie such as dry more, profit most: And those very Aperients that are diluters withal, do set the lymph at liberty, and make its motion free, and withal restore the Serum which is, and is called, the bridle of choler. 2. Bitter things, which both cleanse, and open the Pores of the choler, so that it is hastened more to the Guts and evacuated: the vertue of Wormwood, Aloes and Rhubarb is known: 3. Acids; hither belong *acidum Tartari*, red Sanders, or the red Liverwort of *Dresden*; because these do tame and blunt the Sulphureous part of the choler, and fix and enervate the volatile Saline: 4. Earthy and absorbing Remedies, especially the Nitrous and Alkaline; thus also lixivial Salts themselves belong hither; likewise Shells, Corals, Perles, species and Pouders, &c. likewise Nervines themselves, or Cinnabarines, which I have found profitable in Diseases of the Liver; and I have happily cured a stubborn Pain of the right Hypochondre, with Tettters breaking out all the Body over, with these especially. For it is to be noted, what Experience testifies, that earthy Medicines do precipitate and absorb both choler or cholerick Humours, and also acid and even serous Humours: whence we cannot absolutely conclude, that wheresoever Alkaline Medicines profit, there an acid offendeth; for Experience witnesses, that the earthy profit in many Patients and Diseases, where by the consent of all an acid offendeth not, but the choler regurgitates and is frothy, which they dissociate, inhibit, and bridle in its preternatural motion.

V. Lastly, The tone and fibres of the Liver are strengthened, both by 1. Moderate Astringents; whence it is a common opinion among Practitioners, that it delights in Astringents: 2. Absorbents, especially Steel ones, and the vitriolated that are made of these: 3. Correcters of any excessive temper, but chiefly a moist, and consequently a loose: Hence Mercurials also, and *Mercurius dulcis* in particular is greatly commended, by which with a Bezoartick Steel Remedy *Sennertus* writes that one was cured who was given over in a Dropsie, & that on no other account than because *Mercurius dulcis* makes the Serum fluxile, whence it opens Obstructions, cures Looseness by diverting the Serum another way, and thence evacuating it by convenient ways, &c. Thus Antimonials likewise are good, inasmuch as they notably precipitate and dry, dissolving the superfluous Humours.

VI. So

VI. So Steel Remedies do chiefly perform this; whence there is a caution given concerning their use by *Gul. Gilbert* in his Book of the Load-stone (i. cap. 15.) who says, that Steel is granted in loose Livers and moist Maladies because it dries; also in the Green-sickness, over-grown Spleens, namely where moisture abounds: but he denies it greatly in obstructions, and consequently in the Dropsical and such as have Scirrhus Livers, in the Jaundise, Hypochondriack Melancholy, to whom, he says, it is given to the certain destruction of Thousands: *Fallopian* affirms the same, and **Conringius* grants it only to Scirrhus Livers that are swelled with water, as they generally are. But I will moderate these things thus: wheresoever there are obstructions of the Viscera, the Liver and Spleen, with moisture exceeding and the Liver not too dry, there Steel Remedies are more convenient in a dry form, as *Crocus Martis*, *pulvis Cachecticus*, *flores Martiales*: but wheresoever there is both driness and Scirrhus, there the more moist preparations, or at least not without diluters. So likewise *Septalius* and others write the same of Rhubarb, that in a dry intemperies it is rather the death of the Liver: but the same things hold in it as we have now said of Steel Remedies.

VII. Note that the Liver is hurt by the over-long use of openers: whence those erre who endeavour to expell the obstructions of the Vessels by Incisers, volatil Acids or aperient decoctions alone: so that where there is an obstruction of the pores, we must open, but so, as that it be not done with violence. Such examples are often seen in the Hypochondriack.

VIII. Note also that neither have astringents place always in Diseases of the Liver: we said indeed that firengtheners should be also tonicks, but there are cases where we must abstain from astringents; for instance, if the Liver grow Scirrhus, in the Jaundise, or stubborn obstructions they are not alike profitable. Now we call those astringents that hinder the tone of the Viscera from being loosened. Hence those things that have an astringent faculty, operate with a thinness of parts; those that open, with earthy parts.

IX. This also is to be noted, that we must not trust to Syrups amongst Aperients and Hepaticks: for sweet things are apt to hurt the Liver because they turn into Choler, whence obstructions are apt to be bred.

The amendment of the harm they sometimes cause. XVI.

Being applied outwardly, they are not to stay long on. XVII.

When to be removed. XVIII.

When applied outwardly, they are ineffectual, or not safe.

XIX.

They are to be varied according to the diversity of Temperaments. XX.

What Hypnoticks are good for old men. XXI.

Cold Soporificks are to be shunn'd in Diseases of the Breast.

XXII.

Opiats are to be given in a small quantity and by little and little. XXIII.

A Narcotick or Anodyne of Vitriol. XXIV.

We must not come to Opium and Laudanum, save when Diacodians are insufficient. XXV.

Whether Opium be Poison. XXVI.

How to be corrected. XXVII.

Laudanum being rightly given is a safe Medicine. XXVIII.

Opium is a very safe Narcotick if it be used rightly. XXIX.

Yet it is an enemy to the Brain; XXX.

And to the Breast; XXXI.

Nor are they always useful in Diseases of the lowest Belly. XXXII.

The most simple Laudanum is to be preferred before the compound. XXXIII.

Opium bridleth the vicious effervescence of Humours, and the flatus that are raised therefrom. XXXIV.

Laudanum works more effectually being given immediately before Meat. XXXV.

Narcoticks are not to be given the day before Purging or Bleeding. XXXVI.

They are available in a fluxion from the Head upon the Lungs. XXXVII.

The day following sweat bursts forth. XXXVIII.

When weakness succeeds, how it is to be helped. XXXIX.

They often stop a flux of Humours without sleep. XL.

They may be given the day before the Crisis. XLI.

A Phlegmatick vomiting sometimes follows them. XLII.

Sometimes a suppression of Urine. XLIII.

They may be given with Purgers. XLIV.

When a Purge is to be abstained from the next day after the taking of them. XLV.

If they be given with Purgers, the Dose of the Purgers must be increased. XLVI.

They are of avail in the Plague. XLVII.

In continual Fevers. XLVIII.

In Tertians. XLIX.

With what caution to be given in Intermittents. L.

Let Laudanum be prepared without Henbane. LI.

I. Concerning the right use of Opiatick Pharmacy these four things following are to be observed, viz. before we give a Narcotick Medicine we must consider 1. what such the constitution of the Patient is. 2. What such the Disease is that he's ill of. 3. In what state the Animal Spirits are with respect to both Animal and Vital function. 4. Lastly, in what condition the Blood and other Humours are. As to the first, when an Hypnotick is indicated, see that the temperament of the Patient, the habit or indisposition of his Body, his custom, or manner of life do not contraindicate: As for example, Those who are endued with an indifferent stature, a firm and well set Body, hot Blood, a lively or sharp aspect, bear this Medicine better, and take it often with benefit; but they shall take it more securely if they have moreover been formerly us'd to it. But on the contrary it is not so convenient, yea sometimes it does a great deal of hurt to them who are over fat, or lean; as likewise to those who being either of a rare texture have their Spirits easily dissipable, or of a colder temperament and have soft and flabby flesh, and are of a sluggish and indocible disposition, and dull and drowsie of themselves: to which hindrances or scruples this may be added and encreases the weight of the rest, if they have never taken this Medicine before.

The

Hypnoticks, Narcoticks.

(See Anodynes.)

The Contents.

In the using of them there are to be consider'd the constitution of the Patient; I.

The nature of the Disease; II.

The tenour or condition of the Animal Spirits; III.

The state of the Blood and Humours. IV.

Cautions in their use. V.

They are enemies to the Stomach. VI.

Let them not be given in the beginning of a Paroxysm or near a Crisis. VII.

They are not to be given after Blood-letting. VIII.

They should be taken at a good distance from eating. IX.

How their too great Operation is to be restrain'd. X.

Things indicating their use. XI.

We must not mistake in the Dose. XII.

Laudanum strengthens all the Faculties, and is safely given to Children. XIII.

They are not convenient in a simple hot intemperies; XIV.

And where thick juices abound. XV.

The Nature of the Disease is sometimes of great moment for or against Opiats: In slighter Distempers it is the part of a flattering Physician (according to *Septalius*) to use them: moreover in some great ones their use is either forbidden, or is held very suspected: In the Palsie, Vertigo, Nightmare, Apoplexy, also in the *Orthopnea* or great difficulty of breathing, in a Dropie of the Breast or Abdomen, in numbness or trembling of the Joints, in very malignant Fevers, and in the fits of Agues, or the crises of other Fevers, Narcoticks are very often forbid: Moreover in a cough with much and thick Phlegm, in an *Asthma* and in whatsoever other Distempers of the Breast with oppression of the Lungs, and in Hysterical fits and other convulsive ones they are but seldom to be given and not without caution and the advice of a skilful Physician. But in a cruel Head-ach Catarrhs, Colick, Pleurisie, ordinary Fevers, Vomiting, Dysenterie, fits of the Stone or Gout, and in all pains whatsoever Opiats are not only allowed, but we have recourse to them as to Divine panaceas.

III. And as often as we intend to make use of them we must also consider in what tenour the Animal Spirits (over which dominion they preside) are: for if being fewer or oppressed they already flag, and do not spread their sails enough, certainly they ought not to be further lessened and cast down by Opiats: Wherefore if so be the Animal faculties be not vigorous both as to sense and discourse, or do not exert themselves briskly enough; or when the pulse and respiration have the turns of their reciprocations but weak, or swifter, or also slower than usual, hindred and unequal; or lastly if a numbness and enervation shall seize upon the membres and motive parts with an unwonted languor, we must wholly refrain from any hypnotick Medicine: But we shall not stick to use them, if they are indicated in the greater Diseases, and if withal the Animal Spirits be strong enough in these and other respects, or become too much expanded, or immoderately fierce and outrageous.

IV. Yet the state of the Blood and Humours is not to be neglected in the mean time, because sometimes their naughty condition does wholly forbid Opiats, or suffers them not to be used unless sparingly and with some restriction. The Blood does contraindicate their use, when it offends either in its quantity or in its quality, or crasis. As to the former, it either abounds or is defective, and in both respects it hinders Narcotick Remedies. For first, if at any time the Blood being turgid through plenty, and withal boiling in a Fever, do greatly distend the Vessels, and so the heart greatly labour to drive it most quickly about, (lest it stagnate or overflow any where) by a very swift repetition of its systole's, truly in such case to give a Narcotick, to hinder that labour and endeavour of the heart, without which life could not be maintain'd, were the part rather of a poisoner than a Physician: wherefore in a *Plethora* bleeding ought always to be premised before the use of Opiats. Secondly, nor is there fear of less mischief from Narcoticks as often as they are given in defect or penury of the Blood, as after great hemorrhagies, long fasting or long continued sickness; because seeing the rivulet of the Blood is but small, and through its smallness hardly continuous, lest its flowing be interrupted and therefore cease, the heart by beating very swiftly, as with doubled endeavours, strives to drive it about most quickly: Hence it is obvious to conceive how great harm Opiats do, which put a stop to this endeavour of the heart that is then chiefly necessary. Indeed for this reason it seems to be that we forbid sleep to women presently after Child-birth when their *Lochia* flow plentifully, or to any persons after a large letting of Blood or great hemorrhagies, namely lest the Spirits being recalled in sleeping

leave the heart so destitute, that it cannot quickly enough drive about the lessened stream of Blood. Moreover sometimes the Blood offending in its quality or crasis, contraindicates the use of Opiats, because whilst in a Cacochymie or Fever, the Blood being very full of recrements ought to be agitated with a greater endeavour of the heart and to be more quickly circulated, namely that the heterogeneous particles may be subjugated and soon evaporate, the intervening operation of a Narcotick stops these attempts of the heart, and therefore hinders the lustration or clearing of the Blood, and sometimes frustrates it. As to those other recrementitious Humours that use to be heaped up within the Stomach and intestines, 'tis fitting that these also should be withdrawn & purged forth by vomit or stool before an Opiat be given; for otherwise being fixed there they will stick the more stubbornly; because the Splanchnick fibres, being stupefied by the Medicine are not so irritated as before, nor do easily enter upon or briskly perform their excretory Spasms for expelling these recrements; wherefore according to the old precept, if any thing be to be evacuated, evacuate it before you give Narcotick Medicines.

Willis Phary
mac. Rat.
part. 1.

V. We must observe concerning Narcoticks, 1. that Anodynes are always to be used before them: for seeing they make the Spirits sluggish, often induce a stupor, drowsiness, difficulty of Breath, and sometimes death it self, there is need of great caution in giving of them: 2. They are not to be used before general Remedies: 3. It is safer first to apply them outwardly, and to see whether their use suffice before they be given inwardly: 4. We must mark whether the faculties can sustain the Disease so long, as till the cause of watching or pain can be taken away by ordinary Remedies, nor must we come to them till the Patient be in some danger from want of sleep or pain. 5. According to *Sennertus* (*l. 1. p. 2. cap. 1. Pract.*) If the faculties be not very much dejected by the Disease, but only begin to be in danger through pain or want of sleep, then is it safe to give Opiats, when other things profit not: But if the Patient be not only in danger through want of sleep and pain, but the faculties are already dejected even by the Disease it self, so that 'tis doubted in a manner of the life of the Patient, then they are not easily to be given, because they hasten death and bring on a perpetual slumber.

Frider. Hoffm.
mat. m. m.
lib. 2. c. 4.

VI. Their daily and too frequent use is to be avoided, lest whilst we try to ease pain, we introduce another Distemper, or lessen the Concoction of the Stomach: For I my self have observed this to be true, that they hinder the concoction of the Stomach, for they blunt its fermental Spirit, so that it cannot exert its fermenting virtue, whence follow *Cardialgie*, weight and compressions of the Stomach with anguish.

Idem
ibid.

VII. Let them be banished in the beginning of a Paroxysm, or also when a crisis is at hand; for the endeavour and motion of Nature is inverted by them, whilst the natural heat is suffocated and the febrile heat is hindred from being expanded and the morbidick matter from being expelled.

VIII. Their use after Blood-letting is very hurtful, because the Members being then languishing and almost insensible, a deadly Hemorrhagie may easily arise: See an example in *Borellus Cent. 4. Obs. 57.*

IX. They are to be given after the meat is past off the Stomach, and three hours before eating again, lest concoction be disturbed: yet if there be great necessity, they may be administered even an hour after Supper, the vapours of the meat more easily carrying their somniferous and anodyne virtue to the Brain.

Idem p. 438.

X. When an over large quantity of Opiats has been given, *Platerus* bids us take a Lenient: but that has

has no effect to any purpose. *Wallius* says indeed that 'tis best to give a strong Purgative, but there is fear it should not work because of the restraint that is put upon the motion of the Humours by the Narcotick. *Helmonts* advice pleases me, who does very well conquer the harms and prejudices of Opiats by Lixivials, in *Duamvirat* p. 245. S. 31.

XI. Physicians commit such excesses, as in several other sorts of Remedies, so especially in those that are called Anodyne, which are made of the juice of Poppy, Henbane Seed, or the root of Mandrake, or Styra or some such like: for some to gratifie their Patients, exceed due measure in the use of these Medicines; and some that are unseasonably and immoderately wayward, in wholly abstaining from their use, suffer their Patients to be killed with pains. Therefore as in every both habit and action of a mans whole life, so here also we embrace that counsel of the wise Man, who said *Ne quid nimis*, do nothing too much: because if we may do what we wish in using Remedies to cure the Disease, we must abstain from Medicines that cause sleep: but if through want of sleep and resolution of the faculties the Patient be in danger of dying, then indeed you may seasonably use such Medicines: being not ignorant that the habit of the Body is somewhat hurt by them; but that that hurt is rather to be chosen than Death.

XII. Let not the dose be too large; we should stop pain and not overwhelm. Crude *Opium* causeth convulsions and swoonings: it ought therefore to be given corrected either in *Laudanum Opiatum*, or in Treacle: they give this latter from half a drachm, to one or two drachms. Some women every eighth day are troubled with a great Head-ach, whence by degrees Treacle becomes familiar to them, so that they ascend from half a drachm to six drachms, which no wise man ought to imitate. Let the Physician be content with half or a whole drachm. The lowest and usual dose of *Opium* is one grain or two; a great dose, three or four grains; too great, five or six grains: These things require an experienced and prudent Physician. In cold Diseases or Bodies we give less of Opiats than in hot: Hypochondriacal persons die with giving one grain of *Opium*.

XIII. *Laudanum* sometimes produces divers and contrary operations, though by accident: for while it allays pains and procures sleep, the natural heat recurs, which was dispersed through the vehemence of pain and want of sleep, to the inner parts of the Body; whence the Patient does by and by so gather strength, that all the faculties are entirely restored as it were, and the Expulsive expells what its troublesome & inimicous to Nature, which will be manifest by the following instance. Having once happily cut an intestinal rupture in a Child ten months old, and the wound was now ready to be skinned over, behold he is suddenly taken with great gripings in his Belly, so that he cried night and day: Not knowing the cause (which his parents concealed) I used in the mean time the necessary Remedies; and at length when his strength begun to fail, I gave him a grain of *Laudanum*, with a little *confectio Alkermes*, in milk: That night he rested well enough: the following day an *Echymosis* (or extravasation of Blood) begun to break forth in the sound groin, which by little and little seized upon the Hip and spread it self to the Knee and even to the Foot: yet from that time the pains and gripings of the Belly were lessened: and when three days after, I had given the same potion again they wholly ceased; but the *Echymosis* seized also upon the other Thigh, Loins and os *sacrum*, from which he was shortly freed.

XIV. We must have a care how we use them in a simple hot *intemperies*, where there is no morbidick matter.

XV. And where thick and glutinous juices abound; let soporiferous Medicines be least thought of, if the Patient be in no danger.

XVI. When too great a quantity of *Opium* has been administered, 'tis best to give a strong purgative, for so the thickned Humours are attenuated: Nor need you fear super-purgation, for that is never caused in this case. Two Physicians were accused of being the cause of a mans death; one by a strong purgative had caused a super-purgation; which the other desiring to stop, gave a Narcotick, whereupon the Patient died. ¶ If any dulness or other harm seem to be brought upon the Brain, correct it by washing with a decoction of the leaves of Betony, Mallows and Chamomel flowers: And if the Patient sleep more profoundly and longer than is expected, hold to the Nose a Sponge or rag wet with the sharpest vinegar.

XVII. As soon as the pain is appeased and the Patient lies still, let them be forthwith removed, lest a cold *intemperies* follow an hot one.

XVIII. We shall learn by these tokens when to abstain from Narcoticks: 1. When the Patient feelth not so much heat, pricking and pain in the part affected as before: 2. When to the judgment of the touch the part appeareth cooler than it was: 3. When the fiery red colour begins to grow livid and black by degrees.

XIX. Note that *Narcoticks* applied outwardly obtain not alwayes the desired effect, or do cause danger: Therefore *Mnesidemus* in *Dioscor* gave *Opium* to smell to, and *Rhasis* put it into the Ears (which yet is suspected, seeing it is an adversary to hearing:) For if 1. they be applied to the Forehead; and be not often renewed, they grow hot there, and heat the Head the more; whereupon Sleep is rather driven away than invited. 2. The Forehead bone is solid, dense and further removed from the Brain than the other Bones, whence their vertue reacheth not thither: If they be applied to the Coronal suture, they exert their vertue indeed, but they will be injurious to the Brain; most of which lies thereunder.

XX. It is worth nothing that *Hofman* (*l. de Med. offic.*) has observed, that Flower-de-luce procures Sleep, not by a Narcotick vertue, but a vaporous substance, such as also Saffron, Myrrh, &c. consist of. And they do this in cold and moist bodies, not in the hot and dry: for when in these the native heat cannot raise up vapours to the head, these hot things help it, and by breeding vapours procure sleep.

XXI. I remember that *Mich. Neucrantzius*, a very famous Practitioner, being against the preposterous use of hypnoticks in old men, with good success mingled the Species of *Diambra* and *Diamoschu* with Electuaries made of the Conserve of Rosemary Flowers, Balm and the like, to drive away troublesome watchings from them: Now the reason of this is the same with what *Hofman* gave of flower-de-luce, namely because Mosch and Ambre are fumous or vaporous. ¶ *Opium* appeases watchings and procures sweet sleep, if so be the watchings proceed not from over great driness, in which case they do no good given alone; but they do very well with moisteners, so that by this means the Brain is both demulced, and made drouse especially in old men, and otherwise where the watchings arise from over great driness, defect, Acrimony or other indisposition of the *Lympha*: Whence washings of the Head and Feet, &c. belong hither, as also other vehicles of Opiats, and promoters of their vertue. ¶ We may safely use the somniferous Sponge of *Heurnius* (*2. met. c. 7.*) seeing those that are made to sleep by it, presently awake upon its being taken off; or if they continue to sleep too long, they may be easily awaked with another sponge steeped in the decoction of wild thyme, (boiled in Vinegar together with Majoran, Smallage, and sweet Fennel Seed) applied to the Nostrils.

Idem l. 2. c. 7.
Sennert. l. 3.
pract. part. 2.
c. 2. c. 2.

Wal. m. m.
p. 194.

Sennert. ubi
supra.

Heurnius l.
2. c. 7.

Pareus lib. 6.
c. 13.

Gal. 12. m.
m. c. 1.

Wallius m.
m. p. 153.

Fabr. Hild.
Cent. 5.
Obs. 60.

Heurn. Meth.
l. 3. c. 13.

Wedel de f.
m. fac. p.
205.

Sim. Pauli
quadrip. Bo-
tan. cl. 2. tit.
115.

XXII. As cold soporificks hurt in Diseases of the *Breast*, by thickning the Humours and making them unfit for expectoration; so Flower-de-luce does excellent well in these Diseases.

Sylv. de le
Boe Prax. I.
2. c. 22. §.
113.

XXIII. Seeing 'tis easie to offend in using too great a quantity of *Opium*, it will be the part of a prudent Physician to behave himself warily in the giving of *Opium* and Opiats, and rather to give them at several times, a little at a time, than to give much at one and the same time with danger to the Patients: especially seeing the same, yea better effect may be obtained from the same Opiat given at several times than all at once.

Idem §. 31.

XXIV. Although the Narcotick stupefying vertue of *Opium* differ widely from the pacative vertue of the *Anodyne* prepared of *Vitriol*, which induces only a natural sleep, and no stupefaction (which I would have well noted of all that desire at any time to practise Physick with commendation) yet I will explain the nature of each: The Narcotick vertue of *Opium* seems indeed to be extended to the Animal Spirits, but the pacative vertue of *Vitriol* to the effervescent bile, which I think *Helmont* then calls the *fury of the Archeus*: Let all therefore seek that *Anodyne* of *Vitriol*, and esteem it for a great secret when they find it, for it performs wonderful things in curing divers most difficult Distempers.

Willis phar.
Rat. p. m.
317.

XXV. As to the Heads and Seeds of white Poppy, of which *Diacodium*, as also decoctions, Emulsions and other Hypnotick preparations are made, it is very plain that these are far less endued with a Narcotick Sulphur than the concrete juice of *Opium*, and what thereof is in these, is far more pure and harmless; wherefore we do oftner and more securely give Remedies made up of these. For it is not good to ascend to *Laudanum*, unless when through the vehemence of Symptoms *Diacodiats* will not do. Moreover seeing these contain less of virulence in them, they need not much preparation, but may be used in Medicine being only boil'd or infus'd, or squeezed: But *Opium* is very rarely prescribed simply and by it self, but is wont to be divers ways corrected and compounded, that it may become an *Anodyne* safe enough.

Primros. de
vulg. error.
4. c. 44.

XXVI. When other things have been used in vain to procure sleep, then comes *Opium*: The vulgar are afraid of it as present poison, whereas being rightly prepared and given in a convenient dose it is an innocent and wholsom Medicine. The Ancients indeed have writ that it is a poison; but that is only when it is taken in too great a quantity: but thus there is nothing so wholsom, which by abuse may not become hurtful. Now there are divers sorts of poisons; some are such in their whole substance, which kill however, or in what dose soever they are taken: others only in quantity (otherwise they may profit) as Purgers, and such things are given in that quantity as to overcome Nature; thus milk curdled in the Stomach, or juice of Lettuce are said to be poisons. But among those things which are called Somniferous, *Opium* is the most innocent: 1. Because our *Opium* is generally the *Meconium* of *Dioscorides*, which is made of the juice of the leaves and heads of Poppy; but *Opium* is a tear: Now *Meconium* is far less effectual than *Opium*, whence it must be given in a larger dose than *Opium*, to hurt. 2. We must note from *Galen* (5. simpl. 18.) that of Narcoticks some moisten, as Hemlock, Mandrake, and these are hurtful; others dry, and these are taken inwardly without harm: And 1. de Symptom. caus. he writes, Those things which cool and moisten, cause not sleep, but a *Coma*, stupefaction and *Carus*; but those which dry, as *Opium*, are less hurtful. Therefore according to the opinion of *Dioscorides* and *Galen* we need not be so afraid of *Opium* taken moderately.

XXVII. The Ancients who thought that *Opium* hurt by its excessive coldness, used altogether hot Medicines to correct it, such as Pepper, *Pyrethrum* (or bastard Pellitory) Saffron, Castor, *Euphorbium* and the like: but they were induced to correct *Opium* in that manner, by a false Hypothesis, and they made no good preparation of their Medicines. To speak only of *Philonium Romanum*, heretofore a sufficiently frequent Medicine, experience hath taught, that through the admixture of so many hot Medicines it can hardly be swallow'd but it will burn the Throat and cause an heat therein: and being mixt in Clysters, but even to half a drachm, it has in some caused a great heat in the lower Belly and freight Gut. To day it is very usual to make an extract of *Opium* with Spirit of Wine impregnated with *spec. diamb.*, *aromat. ros.* or the like; or let such Spirit of Wine be added to the extract of *Opium*, as also distilled Oyls and Cordial waters, as we may see in the various preparations of *Laudanum*. * Some find fault with this preparation of *Opium*, because it does equally deposit into the Spirit of Wine the stinking and poysonous Sulphur, which remains in *Opium* even after its having past the fire: yea being more attenuated by the Spirit it sooner exerts its Malignity and insinuates more intimately into the Parts: Whereto they add this also, that there is a certain Narcotick vertue in Wine. These therefore find out another way to prepare and correct *Opium*: They cut *Opium* into small pieces, and dry it so long in dishes set over hot ashes or other gentle heat, as till the stinking Sulphur exhale, and the *Opium* breath out a sweet and grateful smell, and may be powdered betwixt ones Fingers; which happens commonly in six or seven days time; and then they draw a tincture from it with distilled Vinegar. And they chuse Acids, as Vinegar, juice of Citron or Lemons, on this account, because as Acids dull the Acrimony of the Humours, so also the vertue of Narcoticks, and fix and suppress the stupefying Spirits: whence in soporiferous Diseases, or soporiferous poisons the use of Vinegar is profitable; and Vinegar and Acids are the Remedy of drunkenness it self. I will speak here what I think: First as to that drying and slight roasting as it were of the *Opium*, if (which yet we ought to be sure of first) there be some heterogeneous parts in *Opium*, some whereof are more hurtful than others, I will not indeed be against the roasting of it, if it be done so, as that the Narcotick Sulphur, whose vertue is desired, be not dissipated and an ineffectual Body be left behind. The correction that is made by Acids, is suspected; for although I should grant this, that acids infringe the vertue of Narcoticks and are good in soporous Diseases; yet that is not desired here, but the soporiferous vertue, which, if no harm lie hid under it, is to be left altogether entire, and therefore not to be infringed by Vinegar. Therefore as yet I see no reason for rejecting that preparation which is made with Spirit of Wine impregnated with *aromata*, because the Malignity of the Narcoticks is sufficiently corrected thereby. Nor let the Narcotick vertue of the Spirit of Wine offend any one; for the Spirit is all separated, and we use it to separate the Sulphur or Narcotick part of the *Opium* from the *faces* and impurities: and when it is separated, the vertue of the Aromatick Species wherewith the Spirit of Wine is imbued, remains joyned with the *Opium*, and corrects the malignity that is therein, and strengthens the Heart and other Viscera.

* See Schrod.
pharm. l. 4.
cl. 2. c. 394.

Sennert.
Pract. l. 1.
p. 2. c. 1.

¶ *Horstius* (tom. 2. p. 561.) makes his *Laudanum Opium* of *Opium* extracted with distilled Vinegar, adding the extract of Saffron and Magistery of Perles with the oyl of *Vitriol*, which he gives under the title of *Laudanum Opium cum Magisteriis* to eight grains for the highest dose. From the time, sayes he, that I begun to practise, I have alwayes used to fly to *Opium* rightly corrected, as to the only refuge,

fuge, in the greatest and most dangerous Diseases; in continual Fevers, with a total want of sleep, with restlessness, and when the strength was almost spent, (*obs. 22. l. 1. de febr.*) in the most violent Colick pains, in a stubborn Bleeding at the Nose, (*obs. l. 1. de febr.*) in the overflowing of the Terms, Dysentery, pains of the Joints, Tooth-ach, Hysterical convulsions, an hidden Cancer, Phrensie, Melancholy, Madness, great wounds and great Chirurgical Operations: yea also outwardly in stanching the Blood of wounded Arteries. See *obs. 3. l. 10. Barthol. Ep. 46. cent. 3.*

XXVIII. The famous Remedy of *Opium* bears away the bell from all in driving away watchings, and in stopping too great evacuations both of Natural and unprofitable Humours. No error can be omitted therein, if the just dose and fit time be observed: but if people doat, perhaps the latest weakness will be imputed to it: sometimes some things that deserve it not, are reputed for the causes of a mans death, though they rather fall in with the time of death, than are themselves the causes of it: Thus in continual and malignant Fevers we have observed that the death of the Patient has been ascribed to the malignity of this generous and heroic Medicine, although given in a just dose, yet at a wrong time, namely in the agony: so that he whom Fate slew, was thought to be kill'd by this Remedy.

XXIX. Though, as *Galen* shews (*5. simpl. 18.*) there be divers kinds of Narcoticks, some whereof act by a manifest quality, as Hemlock, Mandrake; others by an occult, or by their whole substance, as somniferous Night-shade; which are rarely used by Physicians: yet *Opium* is the principal Narcotic, as being least hurtful, if corrected. I use it more securely being thus prepared: seeing according to the opinion of some Physicians the crude hath an exulcerating vertue, it is first to be dried and to be freed from its excrementitious moisture (under which its exulcerating vertue lies hid.) Where yet we must note, the fire is to be administered warily, lest it contract an *Empyema*, or be quite calcined, and so the anodyne Sulphur, which it has hid in in its Bowels, be lost: afterwards let it be extracted with distilled Vinegar, which draws forth the Salt and Sulphur of the *Opium*: for the Spirit of Wine only extracts the Sulphur, and leaves the Salt untouched, whereas its vital strength is in the Salt, and by means of the Vinegar the tyranny of its malignity is fitly tamed withal.

XXX. Seeing it would be tedious to reckon up all the species of lesser hurts that Narcoticks ever use to do, we will only rehearse here those mischiefs which by their improper & unseasonable use happen sometimes in the Head, or in the Breast, or in the lowest Belly. As to the first, it is commonly enough known, that the principal functions of the Soul, viz. memory, discourse and sharpness of wit are often notably hurt by Narcoticks: the frequent use of them weakens the memory in many. I knew a man that lost that faculty quite by taking too large a dose of *Laudanum* in a Fever: I know that some have by this Medicine contracted a dulness or stupidity of wit, and others madness. And the reason why *Opium* is devoured by the Turks in great quantity without any harm, or however without any danger of life, is, because its particles, though at first inimicous and poisonous to the Spirits, yet by frequent use become at length more agreeable and familiar: as we observe concerning the smoak of Tabaco taken in a pipe; for whereas at the first it uses to cause giddiness, and often Vomiting or Purging, yea cold sweat with trembling and often faintings, yet after a while we take it without disturbance, yea with great delight. And the reason why a larger dose of *Opium* adds courage and notable boldness to them, so that they can enter upon a fight without fear, I say the reason

seems to be, because this Medicine by somewhat stupefying the Spirits makes them amazed, so that they can undauntedly endure the approaches of sensible things howsoever terrible.

XXXI. That Opiats are sometimes inimicous to the *præcordia* and Breast, is clear enough from hence; that they depress and diminish the pulse and respiration, and sometimes cause them to faulter, and by degrees to cease utterly. Wherefore in Fevers, where the Blood being notably depraved promises either no crisis or not a good one, and withal affords only few and weak Spirits to the Animal government, Narcoticks are almost always hurtful and poisons as it were. For though in the pestilence and malignant Fevers, whilst the pulse and respiration hold out well, Treacle, Mithridate and *Diascordium*, yea and *Laudanum* also are often given with profit: yet if at any time in these Diseases, or other Fevers that are not very malignant, the vital function languish, we must use those famous Antidotes very sparingly, but the stronger Opiats not at all. Moreover in a toilsom Cough, Phthisick, Pleurisie, Empyema, and in other Diseases of the Breast, namely in whatsoever Distempers Nature is incited and striveth with all her endeavour suddenly to discharge her self of that which is troublesome and oppresses the Breast, and withal the organs of respiration, wanting a sufficient plenty of Spirits, do faulter, and difficulty perform their work, we must abstain from *Opium* no less than from rank poison: for in such a case Narcoticks do encrease and fix the weight that should be removed, and lessen the strength of the parts which should throw it off.

XXXII. It is found by experience that Opiats do operate in the Bowels of concoction and other parts of the lower Belly, and help them often notably in divers respects: but it will be easie to shew that often they are not so friendly and kind to this region, but that sometimes they do great hurt thereto. For Narcoticks being often taken are sometimes very injurious to the principal faculty, namely the appetite of Meat (whereupon depends all nutrition and the root of life) as very much dulling it and often quite destroying it: Because when the Spirits inhabiting the inmost coat of the Stomach are stupefied or destroyed by the particles of the *Opium*, so that the nervous fibres, though never so much emptied, are no longer contracted or shrivel'd up, thereupon all hunger ceases, and aliments are not at all desired: yea when they are offered to the Stomach they are presently refused, because they would cause rather trouble than pleasure. Moreover for the same reason the concoctive faculty of the Stomach is often weakened, and the excretory motions both of it and the Intestins grow sluggish: for it is a common observation that slowness of concoction and dulness of the Belly (or costiveness) are familiar effects of Opiatick Medicine.

XXXIII. The simple Extracts are often better than the compound, especially when they are not combined to one and the same scope: thus the extract of *Opium*, or most simple *Laudanum* made only of *Opium*, is far to be prefer'd, in my opinion, before all the *Laudanum's* to be had up and down, made with the essence of the species *diambræ*, *diamoschu dulce*, magisterie of perles, &c. For these things are far better added at the time of using it, according as the intention, or the variety of circumstances are.

XXXIV. *Opium* hath a notable vertue to hinder and bridle the vitious effervescence of Acrimonious Humours, both in the small Gut and in the heart and elsewhere, without which, hurtful and sharpish *halitus* use not to be easily raised, which we must powerfully both concentrate and discuss with salt, volatil and oleous Medicines intimately united by the help of art.

D d d d d

XXXV. Lau-

Willis Phar
mac. Rat.
sect. 7. c. 2.

idem
ibid.

G. W. We-
del. phar-
macop. pag.
126.

Franc. Sybri-
us prax. l. 1.
c. 34. § 123.
See tit. de
Syncope lib.
17. § 6.

Rolink lib.
de febr. c.
106.

Frid. Hofm.
m. m. p. 439.

Th. de May-
ern. Tr. de
Laud. M.S.

XXXV. *Laudanum* taken immediately before meat is more effectual especially in driving away pains; and in Dyfenteries it is good to take it not long before eating, for so it exerts its vertue the more strongly.

Idem.

XXXVI. Let it never be taken on the day before Purging and Bleeding, because it dulls the Spirits and hinders the Blood from flowing freely; for no Narcoticks whether taken by the mouth or injected in Clysters, are to be given before purging, because they hinder its operation.

Idem.

XXXVII. Let it be given in a fluxion from the Head upon the Lungs, for it thickens the matter that requires expectoration; otherwise the Patient would be choaked.

Idem.

XXXVIII. It often powerfully causes sweat the next day, and that plentiful, especially about the Head and Breast, sometimes all over, of which the Patients are to be admonished.

Idem.

XXXIX. Often after awaking, the pulse is languid, and the Patient very weak; in which case he must be helped by giving him some Wine to drink, or Vinegar to smell to, or rubbing his pulses with Vinegar of Roses.

Idem.

XL. It very frequently stops a flux without sleep, allayeth pains and strengthens the parts; in some the first day, in others after it has been given a few times, Nature being accustomed to the Remedy.

Idem.

XLI. The day before the Crisis was to be I have given it an hundred times with good success, yea to many when no signs of a Crisis appeared, and yet upon the giving this Medicine there has follow'd a crisis the next day, chiefly and for the most part by sweat.

Idem.

XLII. A Phlegmatick Vomiting follows the giving of it in those whose brain unloads it self into their Stomach, because Nature being made drouisie and the heat dulled, concoction and distribution are not duly performed; whence it comes to pass that the Stomach being loaded does disgorge it self the day after; which the Patient must be told of beforehand, though with some doubting.

XLIII. The next morning after, there is often also a suppression of urine, which is to be provoked by a proper clyster, or with a fomentation of pelltory and chamomel fried in Butter and applied from the Navel to the pubes.

Idem.

XLIV. It may be given with Purgers in Diseases that are very tormenting and painful: I have given it in the Colick proceeding from Choler, with *Mercurius dulcis* and *Aquila rubra*. One Mr N. being sick of a continual and malignant Fever with cholerick vomiting so large as to vomit above fifty times in 24 hours, when he had tried all Medicines and aliments in vain, I stop't his vomiting by some grains of *Laudanum*, given with 2 scruples and an half of *pil. cochia*, upon which he fell asleep, and after five hours went to stool, the stinking choler being turn'd that way.

Idem.

XLV. In the Colick with an Inflammatory disposition, if you give by the mouth or inject by Clyster a Narcotick, take heed of Purgers the next day; for while they stay long in the Body they increase the Disease, as I have learn'd by experience in the Abbat of S. Martins; he slept, and was eased of his pain without relapse; and though the operation of the Purge were slow, yet he went to stool four or five times, and cholerick stuff came away; however there arose a slight salivation.

XLVI. When Narcoticks are given with Purgers, the quantity of the Purgers is to be increased, because the Narcotick vertue blunts their sting; as if half a drachm of *pil. cochia minor* be enough otherwise, let two scruples or two and an half be given with a Narcotick. And let Narcoticks be given with Purges that have *diagridium* or *coloquintida* in them, whereby Nature may be solicited to ex-

purgation; and if the Purge stop, let it be called out by an acrimonious and provoking Clyster. Observe this carefully when you give Narcoticks with Catharticks.

XLVII. In the Plague it is a principal Remedy being mixt with Cordials, namely because by its congealing vertue the Arsenical Spirits, that are most deadly to the Heart, are fixed as it were, and the matter which is most pernicious while it is in flux, is staid and remains almost unmoved: whence it comes to pass that Nature recollecting her strength can the more easily apply to her self the vertue of the Remedy and Alexipharmacks. For in the Plague it provokes sweat, especially if mixt with Cordials. As for example: Take of the water of Scabious, Meadow-sweet, *Cardus bened.* *scordium* of each an ounce, of the Electuary of an Egg a scruple, of the Salt of Wormwood and *Card. bened.* of each eight grains, of *Laudanum* two grains: Make a Potion, which is to be given especially when a Phrensie and burning Fever rages. This was tried in the Daughter of *Ghesnault* the Apothecary. See *Gesner* in his Epistles (and also above, Book 6. under the Title of *Pestilential Fever* and the *Plague*) who uses *Opium* for a Sudorifick in the Plague, A Doctor of Physick being sick of the Plague, Phrenetick and exceeding Cholerick, by taking *Laudanum* came the next morning to himself, the Malady returning again towards evening, to which the same Remedy brought the same ease. He was let Blood twice or thrice, Cordials were given him, especially *Contrayerva*: About eleven his pulse was tremulous, all signs of death were present: Spots like Flea-Bites broke forth: there was a great Carbuncle about the os sacrum: *Laudanum* was given him, he slept, and at last recovered: he took it six times commonly in a day.

XLVIII. In continual Fevers, especially the burning, it is good to cool the heat, allay thirst, appease inquietude, procure sleep, strengthen Nature, and to promote its Critical motion and endeavour: It often happens that on the very day or the next day after it is given, the Fever is extinguished without return. But observe, not to give it the day before solemn Remedies. (See above, §. 36. Idem. 45.)

XLIX. It is sometimes profitable a little before the Fit in Tertian Agues, the Body being first well Purged: Whether is it because, the motion of the morbidick cause being appeased or rather hindered as it were, its ascent up to the Heart was hindered and intercepted, and therefore the *causa sine qua non* of the Fit it self was extinguished or laid to Sleep?

L. But if it be given in Agues, to interrupt the course of the Disease, let the Body be very well Purged afterwards.

LI. I approve not of that *Laudanum* which has Henbane in it, because it disturbs the mind, and makes Men stupid, dull and giddy for some hours.

Lac augmentia, minuentia, or things encreasing and lessening Milk.

The Contents.

The same things increase Milk which increase Chyle. I.

Or which make the wayes open. II.

Or which promote an afflux to the Breasts. III.

Those things which provoke the Terms, do not increase Milk.

IV.

Those things lessen the Milk, which soften and loosen the wayes.

V.

Or which hinder restagnation. VI.

Or which hinder a further afflux. VII.

Fat things are not to be applied to the Breasts when there is a restagnation. VIII.

Repellents are not always to be used. IX.

Things that repel the Milk are better applied to the Heart. X.

The curdling of the Milk is to be hindered by any means. XI.

I. IT seems an easie request for Women, to desire the increase of their Milk; yet the Physician often finds it great enough, if he will undertake to gratifie it. As for the things that increase Milk, they either 1. Increase the Chyle and the more serous and chylous parts of the Blood, not only alimentous things that are easily convertible into chyle and blood, as rear-Eggs, Almond milk or Pottage, plentiful drinking, Cows Udders which are better reckoned among Aliments than Medicines, because they easily contract an hogo; but also Medicamentous, which have oily parts that communicate and are immersed with watry, which is very suitable to the chyle and milk (which is nothing else but the substantifick oily parts mixt with the watry) such as Carduus feed, &c. Other temperate oily things have the same effect also, as the Seeds of Fennil, Parsnip, &c.

II. Or 2. They open the ways, and free the Pores, so that the Milk may freely flow to the Breasts; whence Langius says that all Sudorificks, to wit the kindly and temperate, work that effect; namely absorbers, that hinder coagulation, and by their alkaline Nature (as Salt is the interpreter of the conjunction of oily Parts with watry) procure this commixture: Thus the same Person commends as a secret the decoction of dried Elder flowers in Cows milk, as a most approved Experiment. Likewise Crystal prepared, Earth-worms prepared, and before all Lat Lunæ: Periwinkle also is good taken any way.

III. Or 3. They promote the afflux of the Milk to the Breasts, as Frictions, and fomentations of Decoctions: fresh Burnet laid between the Breasts is commended. Among Minerals Crystal, and especially Quicksilver is powerful, as appears by the tryal of the Women at Padua, who when their Milk fails buy for themselves of the Apothecaries a silberd shell that has the kernel got out of it through a little hole bored in it, and fill'd with Quicksilver, the little hole being stop't with wax; and hang it about their Necks to restore their Milk, which falls out according to their desire. * H. Saxonia gives a double reason of its manner of acting, 1. That the Women are of opinion that it is good for fascinations, and that when the Milk is lost by bewitching, it is restored by this means: 2. That Quicksilver has a vaporous substance in it, and is of so thin parts, that it cannot only insinuate it self into all the thinner parts, but can also dissolve and digest gritty Tumours: whence he argues that it therefore profits in the failure of Milk, because it can fuse and attenuate the thick Blood, which for its thickness and clamminess could not enter into the *Vena Mammaria* and Glands: We have adviced the same thing with success; but the effect in this case is rightly ascribed to the Quicksilver, because it makes the Humours, viz. the Blood and Serum, more fluxile, whence it is more strongly stir'd up to motion, and Milk is collected in the Breasts according to Nature.

IV. Those things that provoke the Terms do not increase Milk; for they are both contrary indications and opposite motions. Now though it may be alledged to the contrary; that by Experience the flowing of the Terms and the presence of Milk may stand together, and that some things, as Fennil, promote both; yet if the *thesis* be understood of those which are properly so called, viz. those which penetrate and drive forwards more strongly, it is true and hath a real foundation.

V. Lesseners of the Milk act either 1. By softning and loosning the wayes; for all Milk that restagnates and finds no exit by Sucking, curdles, whence the Breasts are swelled, inflamed, and are often suppurated. Hence it is an approved Remedy * to apply Emplast. & Diachylo to the Breasts in this case; for spreading a Plaster hereof all over the Breast, leaving only an hole for the Nipple, the Milk either flows out or is wasted without Pain.

VI. Or 2. By discussing or resolving the restagnation, which being done, those things are not only profitable inwardly which promote a regress into the Vessels and dissipate, as Bezoardick Sudorificks, but all such things also which hinder curdling or coagulation; whether they be effectual Emollients, as *Sperma Ceti*, (whence *Timæus* writes that there is nothing so good for a swelling of the Breasts through the plenty of Milk, as *Minsichtus's* Cerecloth of *Sperma Ceti*;) or be endued with a volatil Sulphur or Salt, as Camphor, Saffron, which yet is to be used sparingly; or Salt things, whence Women are wont to lay upon their Breasts Saffron, Salt and Sage, as a cheap and easie Remedy; or bitter which hinder coagulation, and are Enemies to the consistence of Milk; whence those things which lessen Seed, lessen Milk also, as Mint, Hemlock, Wormwood. Outwardly also Frictions with things that are not rough or rugged, as with a Weazils Skin, dissipate notably; likewise to rub them with a soft brush. Milk is also discussed by this vulgar Experiment: If a Woman that gives suck would have her Milk to dry up soon, she milks out her Milk upon the Coals, and in a little time her Breasts grow flaggy: which yet is but an indifferent Remedy; in a slighter case indeed it profits, as we have tryed; but in a greater very little, as often all other things. Women need not be afraid that no Milk at all will return afterwards, for that is contrary to Experience.

VII. Or 3. By hindring the further afflux, such as are both Astringents, as it's usual to apply a quilted Bag with the Powder of Myrtle Berries (open in the middle) and to anoint the Breasts with Oil of Myrtles, though 'tis better to let Oils alone; and also Repellents, whether earthy and watry, as, of common white bole and cerufs make a mass with Rose-water and apply it; or acid, as simple Vinegar or saturnis'd, whether applied alone, or mixt with discutients; whence that notable Experiment of *Morrellus* (Pag. 567.) viz. a Sponge dipt in the decoction of Cummin or Coriander seed with the sharpest Vinegar: hither belong Oxycrate, Ointment of Roses, a Cataplasm of the flower of Beans and Vetches, Cummin-seed, with the juice of Nightshade and Plantain, Vinegar and Oil of Roses: *Pliny* commends the Dregs of Vinegar. And these are useful in three cases, whether in weaning of Children, which may be a good while in doing, and so the matter succeeds more happily; or when the Children die, where it is more difficult; likewise for Preservation, by Persons of Quality, and others, that will not nurse their own Children, in which case I have often used Plasters with very good success.

VIII. Fat things are not to be applied to the Breasts in the restagnation of the Milk; for they not only moisten more, and cause a greater influx, but are apt to cause an Inflammation when there is none, or to increase it when there is: whence as often as we have seen fat things applied in Pain from plenty of Milk, we have almost as often observed Suppuration to follow. Discussers are better in that case, such as Lime-water, which is as good as any thing in the world to hinder all Inflammation, and to cool and discuss.

IX. Repellents are not to be ordinarily used for the Breasts, both because of the Neighbourhood of the Heart, and also because they are apt to curdle the Milk, and fasten as it were and hinder the

D d d d d 2

motion

Miscel. Curios. p. 46.

* Pract. Med. p. 558.

* Willis de feb. p. 289.

motion of the fluxil Humours, that they cannot so well pass back, be discussed, or flow out: hence they are not to be applied but in the beginning, and then only the milder, or mixt with Digesters.

X. Things that repel the Milk are better applied to the Back, namely that the liquor which is about to flow to the Breasts may rather be averted, than when it is already therein, should be detained amiss. Thus for this purpose I have tried the Plaster *ex spermate ranarum* applied to the Back; and before, *Empl. diachylum*, to very good purpose; for so the Milk that is going to flow into the Breasts, is stoppt as it were in the way, and that which is already flow'd in, finds an exit: which we may imitate also with other such like.

XI. The coagulation of the Milk is to be hindered by any means: but if it cannot be softned and discussed, Suppuration is to be promoted. Hence resolvers are always to be put in such Medicines, of Smallage, Cummin and Coriander Seed, &c. likewise acids are to be mixed with Incisers. Moreover all that we have mentioned have place when the matter is as yet within the government of Nature, so that she can apply these Remedies to her self: but if not, there is no other Remedy but Suppuration, which is performed by the more penetrating Emollients, especially by Linseed Oil, Honey, the flower of Linseed, yolks of Eggs, Turpentine, &c.

Wedel. de f.
m. fac. p. 195.

Lac, Lactis Serum, or Milk and Whey.

The Contents.

- Sometimes one sort of Milk, and sometimes another are requisite according to the variety of Indications. I.
Whether it be always to be forbidden for the Conditions in 5. Aph. 64. II.
When Milk or Whey are to be given crude, when boil'd. III.
Where it is necessary and yet does harm, what may be used in its stead. IV.
It is not to be taken with Bread. V.
If part of it stop in the Mesentery, how it may be excluded thence. VI.
When Asses Milk is to be preferred before Whey, and when on the contrary. VII.
A Fever does not always hinder the use of Asses Milk. VIII.
The powerfulness of Milk in sundry Diseases. IX.
The Whey of Asses Milk is effectual in Obstructions. X.
Goats Milk fills the Head. XI.
Whether distill'd Milk cool more. XII.
The way to make Whey that will pass through quickly. XIII.
In internal Inflammations it is not to be depraved by acids. XIV.
It is sometimes hurtful. XV.
When it is used for a long time, let it be made loosening. XVI.

I. THE Ancients used Milk very frequently: for they often made use of it to Purge slightly, to wash and attemperate after Purging, and very frequently to correct the acrimony of the Humours, and lastly to thicken. And as the thinnest of all was chosen for Purging, (as Asses milk) and was wont to be given for that purpose in a notable quantity; so the thicker was preferred for thickening: But in other cases a mediocrity of substance was lookt after, either thickening it by boiling, or on the contrary making it thinner by mixing divers liquors with it: for they used both Cows milk, and Sheeps and Goats milk, as the case required; but with this distinction, that when they intended to Purge, or to wash down the Belly,

they gave it in the largest quantity: for Hippocrates gave sometimes a Gallon for that purpose, but in other cases seldom above a quart, that it might be detained and concocted in the Stomach. When therefore he says in the 5. Aph. 64. that it is bad to give Milk to those who are troubled with the Head ach, &c. he speaks not of that which is given in a great quantity to Purge withal, for that, to speak properly, is not *lac dare*, to give Milk, but rather to Purge with Milk, which manner of speaking was usual with Hippocrates.

II. Nor does Milk given thus bring those inconveniences that are imputed to Milk given otherways: and the reason is, because it makes no long stay in the Stomach, so as to be able to send forth vapours to the Head, or cause *flatus*; and because being taken in a large quantity, it is not subject to the danger of corruption (for on these things the hurts of Milk depend.) And that this was Hippocrates's meaning may be demonstrated from his Doctrine, seeing he uses Asses or Goats milk diluted in all cases wherein it is forbidden by the present Aphorism; for he uses it in Ulcers of the Head, 2. de Morb. v. 158. and in the Falling Sickness, 4. Acut. v. 52. In Fevers he very often prescribes Purging with Asses milk, in a Quotidian from Cholera, and in the Fever called Interficient, 2. de Morbis; in a burning Fever, 2. Acut. v. 10. in Diseases to which an acute Fever is joined, for instance in an Erysipelas, 2. de Morbis: Nor does he deny it to them whose extended Hypochondres rumble, when he gives Asses milk both to the Hepatick and Splenetick, even such as incline to a Dropsie, to Purge them, 1. de int. affect. v. 113. Further he disallows of Milk to those who have had a large evacuation of Blood, and yet 4. Acut. he commands those to be Purged with Asses milk who have had a large flux of Blood. Seeing therefore Hippocrates uses Milk to Purge withal in all cases wherein it is condemned by the present Aphorism, we must affirm that *lac dare*, to give Milk, signifies not Milk to Purge withal, but that Milk which is given for nourishment or alteration: which is confirmed by this, because reckoning up the cases wherein it is profitably given, he only rehearses those that want nourishment, I mean the Consumptive, Persons afflicted with long Fevers, and the too much extenuated, whom we may by no means Purge, at least very rarely. P. Martianus upon this Aphorism thinks, that it is thus to be understood, that Milk must be obtained from where all these Symptoms come together, but not when any one of them is found alone; for if it were not so, there would hardly ever be place for Milk. Wherefore Milk will be ill in a Fever whereto all that concurrence of Accidents shall be joined; which may be collected from the last words of the Aphorism, But it is conveniently prescribed also in long continuing and slow Fevers, if none of the things mentioned be present; that is, if the Sick be neither thirsty, nor have rumblings in his Belly, nor choleric Stools.

III. Hippocrates gave Asses milk boiled in the Bloody Flux, that Purging by its plenty (for he gave a great quantity in the beginning of the Flux) the Parts might be made more firm, whence the Flux might be restrained: for in boiling, some thinner and moister parts of the Milk evaporate, which by moistening might make the Humours more fluxile: Which is observed not only in Milk, but inviolably also in Whey by Hippocrates. For as often as there is need of drying, as in all Fluxes, in Catarrhs, and other such like cases, he always uses both Whey and Milk boiled; but raw, when he would loosen and moisten, and where it is expedient to keep the Belly loose. Which distinction when Modern Physicians neglect in giving Whey, that use it indifferently not only boiled, but twice or thrice filtrated, 'tis no wonder they are so often frustrated in the end intended.

Martian.

Sinibald,
Antiph. 22.
lib. 9.

Martian,
com. in 7.
72. S. 1.
7. Epid. & 11.
de vict. acut.
v. 10.

IV. If perchance natural Milk, either through an occult property or manifest quality, be not pleasing to the nature of the Patient, (which for the first days ought to be Asses's, because it cools more than Goats, viz. for the first twenty days, but for the following forty, Goat's) use an artificial in its stead, for the first days likewise more cooling than nourishing, but for the rest cooling and nourishing. Take of cleansed Melon-seeds an Ounce, of the four cold seeds of each half a Drachm, of the water of Mallows and Gourd of each five Ounces, wherewith make an Emulsion: Afterwards, Take of cleansed Melon seeds an Ounce, twenty sweet Almonds, forty Pine kernels, of Chicken broth ten Ounces, wherewith make an Emulsion.

V. Let Milk be drunk warm from the Cow with a little Sugar, but by no means with a morsel of Bread, lest by staying too long in the Stomach it hurt the Head by filling of it; and let it be used above forty dayes.

VI. In the mean time that no thicker part of the same Milk be curdled and stick in the Mesentery, let the Patient every tenth day take an Ounce of the Cream of Tartar dissolv'd in Broth, that those passages may be clear'd.

VII. Why did Hippocrates, who was wont so frequently to use Whey, both to Purge and wash down, never use it in a burning Fever, though it may seem to satisfy all the intentions that occur in the cure of this Disease? I answer, That Hippocrates does here give Milk, because he supposes that in this Fever, cholerick ichors that fall upon the Belly do offend, in which case there seems no Remedy that can be thought on more convenient than Asses milk; for this by its Purging, vertue may easily draw down the foresaid Humours now stir'd up to motion, and cool all the estuating Body, and mitigate and temperate all the Juices. And because it is expedient that the Belly after it has been loosened by Purging, should remain more firm, he commands the Milk to be first boiled, which is usual with Hippocrates in all kinds of Fluxions. Nor does he fear any hurt from the Milk because of the Fever, because seeing by reason of its great quantity it defends quickly, it cannot contract such a Putrefaction from the febrile heat, as to hurt the Patient: and where (5. Aph. 64.) he forbids to give Milk to People in Fevers, he speaks of that Milk which is given for nourishment in that quantity as may be concocted in the Stomach. But seeing Whey may do the same thing, and more safely; because of the Fever which seems to forbid the use of Milk, why does he let this alone, and rather allow Milk? That may be proved to be done by Hippocrates for Three Reasons: 1. Because perhaps Whey does not carry forth cholerick Humours so as it does Phlegmatick: For though Hippocrates do especially use Whey to wash down and temperate, yet he us'd it far oftener in Phlegmatick Distempers than in Cholerick, although this will seem new to very many: who yet if they look over the places wherein there is mention of giving Whey, will find it most true: Yea 1. de Morb. mul. f. 2. v. 101. he hath reckoned Whey among the Medicines that drive forth Phlegm. 2. A second reason is, Because seeing Whey is very familiar to the offending Humour, which Hippocrates calls a bilious ichor, he is afraid lest the Whey that is drunk should be turn'd into it: for he has admonished, that on this account the cognations of juices to one another are to be consider'd, (Lib. de vet. Med. v. 434.) that we may avoid not only those things, which from their own Nature are bad for us, but those also which are so because of the cognation through which they are easily changed into a juice of alike nature. 3. The Third reason is this: He proposes not Whey in this case, because it is supposed that it is the Summer Season, in which Whey has a greater acrimony than is convenient: For 'tis certain that the

Ancients did not use to give Whey at all times; for Hippocrates never spoke of giving it, but added a condition which may respect some peculiar and fit time. For lib. 2. de morb. v. 158. and in other places he adds this condition, If the Season of the year permit. And that he abstained from it in the Summer, for the reason assign'd, is probable: for it cannot be doubted either of the Spring or Autumn, seeing he gave it to Eratolans's Son about the Autumnal Equinox: That he gave it in the Winter we may presume, seeing he used to give it in Dis-eases wherein Phlegm prevails, which reigns in Winter.

VIII. Milk is forbid by Hippocrates to Persons in Fevers, because it may turn to choler and a noxious corruption: but the same Hippocrates 5. Aph. 65. grants it to those who are not very feverish, which yet must be understood of a Putrid Fever, for who doubts of its use in Hecticks? Therefore we must only abstain from it (viz. Asses milk) in the Fit, and allow it on other days. Nor will Obstructions hinder, for those being dry may be taken away by its mollifying of them, seeing it contains neither a cheefe nor buttery substance that might cause or increase them; whence Aetius gives Asses milk to dissolve gritty Tumours, and for preservation from the Stone; and especially seeing the same Person in Quartans from aduision, even without any suspicion of an Hectick, gives Asses or Goats milk, from three to six Pints, to Purge withal.

IX. Indeed there is something divine lies hid in Milk, which I had never believed unless I had found it by my senses in those whom I have perswaded to drink it to mitigate and at length to get rid of the torment of the Gout: I have with these eyes seen them made new men as it were thereby; for by a right use of it very many have acquired a firmer habit, a better colour, and stronger Faculties: Moreover by it hypochondriacal Symptoms and the Stone have been removed, which to some will seem incredible; I could produce living Instances of this thing. But in this cure one thing is to be greatly heeded, that the Milk be not turned into clods or choler.

X. The Whey of Asses Milk is commended above the rest, not because it is colder, as some Moderns think, but because it cleanseth and evacuates more, by reason of a certain acrimony it partakes of: upon which account it is commended by Mesue even in the Dropsie and confirmed Obstructions.

XI. The Whey of Goats milk, although it cools, yet moistens; and which is of greater concern, so fills the Head it self, that those who are subject to Distillations fall into Pains of the Joints by the use of it.

XII. Some use distilled Whey in Fevers that it may cool the more: Now in distillation none doubts, but that the thinner parts ascend, and the thicker subside. But it is clear from Galen (10. Meth. c. 9.) that there can be found no cold substance that is of thin parts: Separate therefore as much as you will, you shall always have the thinner parts, and therefore the hotter, if you take that which passeth out, and not that which remains behind. Yet they contend that the thin are depurated from the Nitre, and therefore that distilled Whey has lost its purging vertue: but give but five Pints or more of that distilled Whey, viz. as much as the Ancients gave of the undistilled, and 't'll be far enough if it loosen not the Belly, yea by so much the more, by how much it penetrates the Belly better, and by its thinness washeth, cleanseth and purgeth. Hear *Libanius: Thus therefore Milk is divided into three parts, namely the Aëreal, with which is also the fiery, which may be separated by distillation; Secondly the watry; and lastly the earthy, which they call Cheefe, as the watry, Whey. Therefore according to him, that

Marston
comm. in
v. 10. S. 4.
l. de vitæ
Acut.

Jo. Ja. Weß
serus in cen-
tur. Obser-
Verzähe
p. 276.

Saxon. Pr. p.
p. 1. c. 18.

* Continet
Alchym.
Se. part. 1. l. 3.
c. 18.

S. Rod. Ca-
strensis tra-
de sero.
cap. 8.

that which goes out first in distillation, cannot properly be called *Serum* or *Whey*, but it is called the *aëreal* and *fiery* part: in the second place comes the *Whey*, and then the *earthy* or *cheesy* part is left. ¶ If you desire a more perfect Separation by the help of fire, mark that you will receive almost nothing of the *Sulphur*, for its virtue vanisheth away, &c. But after the heat comes to the other substance, which is the *Salt*, it readily ascends (because it is dissolved;) and if it find the cover close, it will remain sublimed: but if there be a *rostrum* or snout, in the cover, the thin substance will pass forth, yet not without the *Salt*; because the *Salt* of fixt has been made volatil: therefore from your distillation you shall have a liquor, that is thin indeed and clear, but full of a volatil *Salt*, therefore unfit to cool, yet more profitable for *Dropsies* and other cold Diseases, but hurtful not only for cold intemperatures, but also for dry, because it is hot and drying.

Idem cap.
ult.

XIII. *Whey* should be made just before it is drunk, and of *Milk* that is newly drawn from the Cow, boiling the said *Milk* one walm, and as soon as it begins to boil, dropping a little of the Juice of *Lemon* or *Vinegar* into it, and then taking it presently off the fire; for there will forthwith be a separation of the *Whey* from the *cheesy* part, which by straining and clarifying with the white of an Egg becomes very clear, and may be taken in a large quantity without offence to the *Stomach*, so that it is often drunk by some like *Mineral waters* with great benefit.

River cent. 1.
Obli. 98.

XIV. When the *Stomach* is inflamed, *Whey* is good, but not that which is depurated with acids; for sharp things exasperate Inflammations, according to *Galen* xi. *Meth.* 19. Put into it the juice of sweet-scented Apples.

Fortis conf.
86. cent. 2.

XV. I suspect too much *Whey*, seeing all unprofitable moistures in the *Veins* either grow fowr or salt.

Idem conf. 3.
cent. 1.

XVI. *Hercules Saxonia* gives this admonition concerning *Whey*, that if it be to be given daily in the hotter Diseases, Temperaments, &c. it is to be made loosening or diuretick, or to be given in a moderate quantity. For, says he, as I have found by Experience, they that take much of it, and retain it, grow worse: perhaps because it is vaporious, as *Milk* also is.

give great disturbance: 3. That by consequence they are communicated to the Vessels about the Liver, infect the Blood contained therein, and so may beget new Diseases, or increase those that are in being already: We must always begin at that without which we cannot safely execute something else: 4. There is no profitable substance in the mucous and cholerick Humours in the Guts, nor in the foul moisture that besets the Glands of the Mesentery and Caul: These are already separated from the profitable juice, and neither desire nor admit of concoction. 5. *Hippocrates* contradicts not, when (1. *Aph.* 22.) he bids us medicate things concocted and not crude: for there he speaks only of the Humours that are in the second and third Region. Others grant that the use of Lenients is sometimes necessary, but not always, nor in every Patient, nor in every form. 1. There is present an indication to purge, and to pull up the roots of the Disease by stronger Medicines: Our sluggishness is the cause that we cure not great Diseases, because we will never have done with Lenitives: That Physicians may avoid calumny, they commonly prescribe no Remedy that is generous. 2. When the Body is crude, 'tis safer to move nothing, especially when the Faculties are weak. 3. There is sometimes greater need of Bleeding. 4. Some when they hear of Physick, presently nauseate, especially such things as use to be given in a larger quantity, as Lenitives. This distinction is to be used, By reason of divers circumstances Lenients are necessarily premised in the first place: but sometimes they may be omitted or postponed, if the great causes rehearsed be present.

Rolfink. m.
m. spec.
P. 450.

II. Lenients for curation, when a Chronical Disease invades, must be taken before Preparatives to cleanse the first ways, in the Mornings: For preservation, to keep the Belly soluble, they must be given at the same time. Let us inquire whether it may be done before Meat, or in a short while after. *Galen* (2. de *Alim. Facult.* c. 31.) seems to affirm that Meat is not to be taken presently after a Medicine; for speaking of Prunes loosening the Belly he says thus: It is clear that after we have eaten them it is profitable for loosening the Belly to drink sweet wine, and to interpose some time, and not presently after to Dine: and we must remember that this is common to all things that loosen the Belly. Some are afraid of lessening the loosening virtue, if one either eat presently after a Medicine, or it be taken as one Dines or Sups: for they think there is danger that either the virtue of the Medicine will be dulled, or that it will be utterly corrupted from the mixture with the Meat, especially if meats be thrown in without any choice, and be contrary to the Medicine, as hard and astringent. As in the composition of a purging Medicine there are some things added to increase its operation, as *Ginger*, *Sal gemma*; so it is not to be doubted but amongst aliments there are some to be found, which do dull Purgers, and weaken their operation. 2. The same Persons are afraid of corruption, or at least of a diminution of concoction. Meats are corrupted, because Medicines are enemies to Nature, and spur her forward to Excretion: They are concocted imperfectly, whilst by the motion of Fermentation they disturb the action of Chylification, which is performed quietly, closely and leisurely: Moreover the Chyle is communicated crude to the lacteal Vessels, and the fault of the first concoction is communicated to the second. 3. Others will have Lenitives to be taken extraordinarily, either a little before, or just with the Meat. Things persuading this are, 1. The nauseating nature of the Patient, which cannot take Medicines alone: 2. The nature of the Medicines, which being not strong, do slowly execute their office: besides they cannot resist the heat of the Stomach, unless Meat taken either with them or a while after them hinder it: 3. They may also be turned into Aliment

G. W. We-
del. de l. m.
fac. 131.

Lenients, or Looseners.

(See *Alvus adstricta*, or Costiveness, BOOK I.)

The Contents.

- They are to be used in the beginning of every Disease. I.
- When to be taken. II.
- Some work by accident. III.
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- Whether they be always convenient. V. I.
- They may be given with meat. VI.
- They may be mixed with Purgers. VII.
- If Lenients suffice not to carry down the Excrements of the first Region, Purgers are to be given. VIII.
- Sometimes we must use Emollients, sometimes Cleansers. IX.
- Things sprinkled with Night-dew loosen effectually. X.
- How to loosen the Belly by a Decoction of Prunes. XI.

I. Some think now adays that we must use Lenient Medicines in the beginning of every Disease; 1. Because mens Bodies are far more filled and impure than in *Hippocrates*'s time: 2. Then unless the first ways be clear, the Humours that are to be brought forth from a far will be forbid an exit and

ment by an hungry Stomach. Experience teacheth, that Lenitives, as pills of Aloes, taken half an hour before Dinner or Supper, in the midst of them, yea or in the end of either, do their office very well, in a just dose, being continued for two or three times: the action it self may be confirmed by reasons, and strongly defended from the force of their arguments that think otherwise.

Idem.

III. If inquiry be made concerning the manner of their action and operation; we say that it differs not from that of Purgers: For Lenients irritate, both by accident, and *per se* or properly and of themselves. Those things do it by accident that dissolve the consistence of the *feces*, hinder their compaction, and make them fluxile, when they are more easily expelled, such as are 1. *things watry, moist and which may be drunk*, whence we observe that by drinking much the Belly is continually kept loose: and therefore those who have their Belly obstructed by the driness of the ordure and intestines, we profitably advise them to drink a little more freely, which unless they do, all stimulators are but in vain. Thus the whey of Goats milk besides its nitrous vertue, helps to loosen the Belly by its watry consistence. 2. *Things mucilaginous, pulposus, and such as are endued with a power of moistening effectually, and of moving and disturbing the Humours* sometimes, as Raisins and Corinths without their stones, which we have commended with good success in an obstinate costiveness, &c. 3. *Fat things*, for these also do both excellently smooth the sides of the Guts, and also hinder the hardness of the excrements, or take it away if it be there already: hence Butter, especially before meal, loosens the Belly, also oyl of sweet Almonds; not to mention, that these very fat things also themselves have Saline stimulating parts. 4. *Saline things*, whence Salt of Tartar loosens the Belly, also the tincture or Tartar, which upon this account is commended by *Hartman* for costiveness; whence these things are also put into Clysters: likewise some *acidula*, as crude Tartar, its cream and crystals, which excellently mollifie and cleanse: also somethings of a middle Nature, as common Salt; likewise in particular nitrous things, whence crude Nitre, &c. often notably loosens the Belly: hither belong nitrous plants, as Sugar, &c.

G. W. Wedel. de f. m. fac. 131.

IV. Those things perform *it per se* or of themselves, which sollicit Nature, though more gently, to expulsion; which indeed some of the Saline Remedies already mentioned do: but those do chiefly come under this rank, that have a Salino-sulphureous Acrimony, as not only Aloes in chief, but even all other purgers properly so called, being given in a lesser dose, are Lenitives.

Idem.

V. And these are convenient in any Disease: yet it is not necessary to use them in every Disease, and that in the first place, and before any thing else: but they may be used in every Disease, for in any one it is good to have the Belly open.

Idem.

VI. And there may be given with meat, both the alimentous, and also those that have no such great vertue to disturb the Humours and Stomach, but are kindly and Balsamick.

Idem.

VII. These help Purgers themselves, so that other things may fitly be boiled with prunes and Raisins.

Idem.

VIII. Lenitives indeed evacuate the ordure and first ways; but the Humours in the first ways do not only indicate Lenitives, but their resignation and stufing do altogether require also the stronger Purgers and such as are properly so called.

Idem.

IX. Sometimes lubricators and emollients are more convenient; other whiles the gently cleansing and stimulating: Those namely are better, where the Stomach is in good order, and there is driness in the Guts; These when the Natural Stimulus and expulsion of Nature is wanting: with those the Sto-

mach is not to be overcharged, for so its tone is easily hurt.

X. Amongst Lenitives *Night dew* is to be numbered, which falls in the summer time (nearest the Spring and Fall) upon any thing of a softer Nature, whether eatable or drinkable, medicinal or not: It is of that Nature as very well to loosen the Belly, as both experience testifies and authority confirms. *Hippocrates* who exposes purging potions to the open air (1. de m. m. n. 123. and often 1. de nat. mul. 2. 49. and 1. de int. aff. 21. and 38. and 3. de morbis) says very expressly, *You shall give all things to a man in a Fever, exposed to the air without doors for a night, except such whose Belly is too loose.* *Dioscorides* consents, who 2. c. 29. orders the eating of a Gudgeon that has in the night been laid without doors, to make the Belly soluble. *Archigenes* in *Galen* (9. K. T. c. 66.) approved of preparations of Medicines abroad in the air. *Oribasius* coll. 8. often when he propounds any thing solative, orders it first to be exposed without doors. Many commend the water distilled from collected dew, to provoke to stool: to wit because dew seems to be very detergent and extenuative, &c.

Severini. Chirurg. Trim. p. 18.

XI. A certain Melancholick person was very costive, so that sometimes he went not to stool in six or seven days; which inconvenience was Remedied by taking two hours before supper boild prunes with their decoction, to which was added half a glass of very watrish Wine, one half whereof he took before the prunes, and the other half after: by this means his Belly was very well loosened, and far more effectually than it uses to be by prunes alone.

River. Celsi. 3. Obl. 6.

Ligatures.

The Contents.

They are rather hurtful than profitable in stanching of Blood.

I.

The way of using them according to Hippocrates. II.

They act not by attraction. III.

I. Most use Ligatures in the cure of an hemorrhagie, spitting of Blood, &c. But they are not well approved of though proposed by *Galen* (5. meth. 6.) for as soon as the Ligature is loosed, the Head is filled, or any other part wherein the Hemorrhagie is. For the Blood that was retained beyond the Ligature, as soon as the band is loosed, becoming unbridled slides into the weak part. Therefore *Oribasius*, *Aëtius* and *Avicen* use Ligatures to procure sleep, for no other reason than because the head is filled upon loosing the Ligature.

Saxoni. Prælect. pract. p. 4. c. 24.

II. *Hippocrates* (2. de morbis mul.) commands to lay unwash'd wool as a Bolster under Ligatures that are made for revulsion; that the Ligature may indeed bind straitly, but the pain from the constriction may be prevented. For we use Ligatures with a double intent, 1. That by the pain which they cause, either the benumbed or drowsie faculty may be excited; or that revulsion may be made from the affected to the tyed part. But sometimes we use them to stop a flux of Blood, and then we must see that the band be fast, for so the flux is stopped; but pain is to be avoided as much as may be, whereby the Patients that are debilitated by the flux of Blood, might be hurt. For this end therefore he lays soft wool under the Ligatures, which is a profitable artifice of *Hippocrates* which none that I know of has hitherto made use of.

P. Marriani comm. in v. 32. loc. cit.

III. It

III. It is manifest that painful Ligatures attract, because the part that is intercepted by the Ligature swells, so that it is even inflamed by the plenty of the Blood that rushes towards it, and unless it be loosed, a gangrene may come upon it. 2. It is demonstrated by the Ligature that is in order to Blood-letting: If the neck be tyed with a fillet, the veins of the Head swell; for the pain of the Ligature is believed to draw to the Head. The manner of attraction is ascribed to pain, heat and *fuga vacui* (or the avoiding vacuity) To pain indeed, as it depends upon its causes, an hot *intemperies* and a solution of continuity springing thence; this debilitates the part and makes it unable to repel the Humours from it, whence the tyed part swells. But there is a far other reason of this swelling; Ligatures upon the Arms stop the motion of the Blood that is flowing out at the Nose, not because they attract upon the score of pain or heat, but because they retard the Blood, that is received from the Arteries and is a returning to the heart by the Veins, from passing so speedily to the right ventricle. On this foundation the vertue of Ligatures rests; whilst they are made upon a sound part, they hinder the Blood from flowing back by the Veins to the affected part in any plenty, & so the affected part is freed from the influx.

Rolinc.
Meth. Med.
p. 442.

Narcoticks.

(See *Hypnoticks* before.)

Nephriticks, Cysticks, or Medicines for the Stone.

(See Book 3. *Calculus Renum*, or the Stone in the Kidneys, and Book 15. *Renum affectus*, or Diseases of the Kidneys.)

The Contents.

They respect either the resolution of the Coagulum in self; I.
Or the Saline Acrimony and irritation of the genus membranofum; II.
Or the opening of the ways; III.
Nephriticks and Cysticks are the same. IV.
Nephriticks are not to be confounded. V.
Resolvers hurt when a Saline Acrimony offends. VI.
The Reins rejoice in moisture, but not excessive. VII.
Where Topicks are to be applied. VIII.
Refrigerating ointments scarce cool because of the oyl. IX.
Hot dissolvers of the Stone many times do hurt. X.

I. IT being presupposed 1. that the Material cause of the Stone is a dry concretion, that in a Natural state is voided with the Urine, or a Tartareous Salt, consisting of an earthy and Saline matter, although a viscous Humour may also concur; 2. That the Blood of calculous persons (add of Gouty and Hypochondriacal) abounds with such Saline and Tartareous Coagulables; we say that Nephritick Medicines are both such as resolve, and such as mitigate, and such as drive forward; and so they respect 1. the resolution of the coagulum in self, or the slimness or muddiness of the Blood tending now out of the Vessels, separated in the Kidneys and Bladder but not expelled, whether it offend by its

plenty, or Nature her self fail in her expulsion; and the earthy parts by the access of the saline fixed & volatile turn into a coagulum, such as are 1. *Alstergers*, both watry and diluting, that afford a more plentiful Serum for the draining out of those excrements, and are good against gravel when there is a plentiful sediment in the Urine and the stone is a breeding. 2. *Sulphureous Resolvers*, that more intimately hinder coagulation, and hinder the matter from stopping there, whether they be more temperate, oily, obtruding and taking away Acrimony, of *Sperma ceti* and other Aperiens, that are good in any obstructions, stoppage of Urine, stone, &c. or more active, fusing the Blood as it were, and precipitating and liquating the Serum into the Kidneys, such as are chiefly Remedies of Turpentine which give the Urine a Violet smell, which is a notable testimony that their vertue reaches hither, the oyl of Amber, &c. 3. *Saline Resolvers*, whether Acid, inciding and detaching, as *Acidum Tartari*, acid mineral Spirits, especially Spirit of Salt, or soapy, and earthy alkalis, & obforbing Lyes, which are of avail either through their Salt which they keep retir'd, or from their notable vertue of absorbing saline Humours, as Crabs-eyes, the Salts of plants, the tincture of Tartar, &c. whence belong hither most of the more generous Aperiens Diureticks, and Lithontripicks. From hence it appears why Acid and Lixivious Medicines also are good in the stone, namely both of them resolve, correct glutinosity, and destroy a preternatural coagulum; likewise other things that take away grumescence or clodding, and resolve coagulation, which also are good when clods of Blood stop about the Bladder.

II. Or 2. they respect the saline acrimony and irritation of the genus Membranofum, and are temperating, moistening, cooling, absorbing, whether the parenchyma and Membranous and Nervous passages be hurt by an acrimonious caustick Salt, as it is common upon taking *Cantharides*, to have all the harm accrew to the Kidneys and Bladder alone, or from the weight and sharp corners of the coagulated Stone: Such are 1. those things that are common as it were to both, temperate and demulcing aqueous Remedies, not Saline, Sweet and Mucilaginous, as Gum Tragacanth, Gum Arabick, the pulp of Cherries and Cassia, Raisins, Sebestiens, Conserve of the flowers of Mallows commended by *Amatus Fernelius's* Syrup of Marsh-Mallows, &c. 2. Things also that are partly oily and watry, as sweet Milk, Emulsions of the cold Seeds, which as they ease the Symptoms that are caused by *Cantharides*, so they do in a special manner demulce and ease the ways that are torn by over stretching as it were, and by accident they cure nocturnal pollution, help the Strangury that springs from a serous acrimony. 3. *Precipitants*, whether they be withal Stypticks, as in pissing of Blood and other laxities; or Nervine, as Cinnabarines, the more temperate specifick powders; so also steel Remedies belong hither: hence *Hernius* upon *Hippocrates's* aphor. 6. 6. where when he had said that the pains, and Diseases of the Reins and Bladder in general are hard to cure, he commends experimentally in an Ulcer of the Kidneys the juice of steel, that is steel Wine, made of the filings of steel macerated in sweet and strong Wine. 4. *Acids* correct a bilious Acrimony, if it be present, as red Liver-wort; whence according to *Hippocrates* (*lib. de locis*) *Acids* both cause the Strangury and help it: And these, as we have already intimated, are good for Bloody Urine, diabetes, nocturnal pollution, heat of Urine, yea in the stone it self; and we must also have great regard to the pains, which are as it were the tyrants of indication. 5. Hither belong even *Opiats* also, which being mixed with resolvers are very useful in the Stone, not indeed as if they resolved primarily, or as if they cleared the wayes, but because they give rest to Nature.

III. Or

III. Or 3. They respect the *stopping and clearing* of the ways, not so much by driving forward as loosning; that way and leave may be given to the departure of the unwelcome Guest, such as are internal and external *emollients* and *purgatives*, lubricators and moisteners, especially oily things, chiefly Oil of sweet Almonds, likewise Chamomel, the Decoction whereof resolves withal; whence the Flowers thereof in Pottage give present ease in the *Cardialgia* or Pain at the Stomach, the Colick, Stone; also fat Broths; for they give by so much the present Ease, by how much they resolve the more withal; thus the Oil of sweet Almonds with the juice of Lemons is a Secret with some. Hitherto belongs that place of *Walaw*, (*m. m. p. 4.*) In Pains of the Stone, says he, whether you Purge or Bleed, you do nothing; but if Turpentine be given with Manna and the Oil of sweet Almonds, the Business is done. So externally also mollifying and resolving bags are profitable, (not omitting distilled things that have a penetrating virtue) likewise Ointments, Pultesses, Clysters, Baths.

IV. But those are over-nice and multiply Entities without necessity, who treat of Nephriticks and Cysticks severally, for there are the same causes of the Stone both in the Kidneys and bladder, therefore the Remedies will also be the same. Note therefore that while we alter the Reins, and apply Remedies to them, the Bladder is always to be respected at the same time, and on the contrary, lest while we would benefit the one, we hurt the other, which is to be observed chiefly in active Alteratives; for they may be also affected severally, as the Bladder with a *Scabies*, and the Reins with Ulcers, &c.

V. Nephriticks are not to be confounded; we must not drive forward where we would resolve, or mitigate; nor must we mitigate where we would resolve. Both Empiricks and the Patients themselves erre often in this, when they endeavour to drive out the Enemy (*simul & semel*) all at once as it were by stronger expellers; by which preposterous purpose, when, for instance, they give Balsam of Sulphur, Oil of Juniper, Turpentine, &c. alone, they have for their Pains a bloody Urine or Ischury. But expellers have then chiefly no place, when the Stone sticks in those parts out of which it cannot be expelled without hurt; as when it fixes in the Ureters: whence it is better to use Resolvers, yea Mitigators withal, whereby Nature being strengthened attempts the Expulsion of the troublesome matter, and drives it forth.

VI. Note that when a Saline acrimony bears sway, all Resolvers are in vain as it were, whence all acid and acrimonious things are to be avoided, yea Wine it self: So provokers of Urine are not good in the pain of the Stone in the Kidneys, or when they are ulcered, or in pissing of Blood, or the *Diabetes*; for in these cases only mitigators, temperaters and strengtheners are better; not omitting yet in Ulcers mild Abstergers and the more temperate Terebinthines, for instance, those that are reduced to drincks.

VII. Yea the Kidneys rejoice in moisture, but not excessive; hence also all hotter things are to be shunned, which being apt to consume the more ferous Parts and leave the thicker, do make the slimy substance more compact, so that a Stone is the more easily bred: moreover they are not to be loaded with too much drink, or a great deal of over-moist things, for when they fail in their office, a Dropie is apt to arise. ¶ Let the Patient never sit in a very hot Bath, nor stay in it above half an hour; for through an error here, the Kidneys easily inflame and Gangrene, which about a year ago happen'd to a Person of condition at Lucern.

VIII. The Topicks for the Kidneys are applied

to the Loins, those for the Bladder, to the *Rubet* and Navel; those for the Ureters, to the sides of the *hypogastrium*: Chiefly in stimulating of the Urine we have observed that distilled Oils are profitably applied to the Navel, because of the content through the Umbilical Vessels.

IX. But heating Topicks are more used than cooling, such namely as have place (for instance) in the *Diabetes* of Plantain and other things. For this Paradox is greatly to be noted; that we must never trust to cooling Ointments, to wit, to such as (for instance) are used for nocturnal pollution; of Galen's refrigerating Ointment, Mesue's Ointment of Roses, the Oil of Henbane, &c. for Oils are G. W. Wedel del. de f. m. fac. p. 112. hot in their own nature, and loosen more than they bind.

X. Out of the Fit of the Stone the accretion of the Tartar is to be prevented, and the increase of the Stones: which is not done by the hotter Lithontripticks, be they never so much commended; yea the production of Stones is promoted by these Medicines, and I have known the Disease made incurable by them.

Ophthalmicks, or Remedies for the Eyes.

(See Oculorum affectus; or the Diseases of the Eyes in general, Book XIV.)

The Contents.

They either respect the Eye it self; I.
Or the impure Humours; II.
Or the defect of the Humours; III.
Or the Spirits and Nerves. IV.
Suppuratives are hurtful in Diseases of the Eyes. V.
Opiats are to be used warily. VI.
They endure mucilaginous things, but not clammey. VII.

I. Ophthalmicks, as to the manner of operation, respect either 1. The Eye it self, whether as to the *tunica adnata* inflamed, as in an Ophthalmie; or as to the *cornea*, not letting in the visible Species, dusky, ulcered, wounded; such as are both *Repellents* and *Abstergers*, whether somewhat acrimonious, as fat things, of which the principal is the fat of Vipers, Rue, white Vitriol, &c. or watry, as distilled waters; or earthy, as Perles prepared, &c. which besides that they are good in an Ophthalmie or Inflammation of the Eye; as waters are, profit also in Pustules, Excrescences, and in things that grow to the *tunica cornea*, in Haws, Ulcers and most other Distempers that occur to the Eye.

II. Or 2. They respect the impure Humours, vapours, and halitus, both inwardly and outwardly, such as are discussers, whether Internal, most of which are Cephalicks, or External; whether the Distemper have arisen principally from an internal cause, such as are good in a suffusion and weakness of Sight, and procure a due consistence to the Humours; or from an external, as from chafing or a stroak.

III. Or 3. They restore the failing Spirits; so *Burhus* has cryed up Celandine water, *Heer* the juice of Elm-bladders presently dropt into the wounded Eye. These are good moreover on this account in Scars, Haws, Ulcers, straitness of the *Pupilla*, Poreblindness, Mopeyness, depravation of Sight.

IV. Or lastly, They respect the Spirits and Nerves, both such as open and unlock these, and also such as comfort and restore them, internal and external, which are of use in the *gutta serena*; weakness of Sight from bruises, stroaks and internal fault, the Palsie, &c. And these scarce differ from Cephalicks especially

Wedel.

Wepfer. con.
fil. mt. de
Nephrit.

especially those of thinner Parts; and Severinus commends volatils themselves, as the volatil Salt of Vipers, in that case outwardly. The rest, as Astringents, Traumaticks, &c. are common, as also revulsiory, as blisters.

V. Suppuraters are to be avoided by any means, whence neither are Emollients indifferently convenient: I have seen a great Inflammation of the Eyes turn to Suppuration even of it self.

VI. Oils are to be used warily, not because they take away the sense of the Part, but for their acrimony, and because they put the Spirits to flight.

VII. The Eyes delight in maciliginous things, but not so in clammy; because these stir up Pain, but those being conformable in their temperament, demulce, defend, alter.

Wedel. de
f. m. fac.
p. 85.

Preparers of the Humours.

(See Aprients and Alterative.)

The Contents.

Whether they be always necessary before Purging, and what kind of Preparation is requisite. I.
When Nature is oppressed by Humours offending both in quantity and quality, how to be made. II.
As the Crudity of the Humours depends on their disgregation, so their Concoction is to be expected from Temperature and Union. III.
Things that are thick from adustion are otherwise to be prepared than those that are thick from crudity. IV.
Preparation may and ought to be made by outward Applications. V.
Whether and what Humours are to be altered. VI.
They may be given at anytime. VII.
How thick Humours are to be prepared. VIII.
Whether thin need Preparation. IX.
When the Alteratives ought to be as strong as the quality to be altered. X.
Let alterations be made by degrees. XI.
Let there be an Analogy between the alterative and thing to be altered. XII.
Concoction is not to be interrupted by the giving of looseners. XIII.
Whether the bilious Humour be always to be prepared by cold things. XIV.
The abuse and hurt of Apozems. XV.
Barley water is not to be put in Apozems. XVI.
When Laxatives are hurtful. XVII.
Before Purging let the Body be made soluble rather by a Clyster than Syrups. XVIII.
With these, Strengtheners are to be administered. XIX.
Infusions are better than Decoctions. XX.
All distilled Waters are naught for the Stomach. XXI.
Chymical Openers are to be preferred before Galenick. XXII.
Aliments that one is used to, will not supply the place of Medicines. XXIII.
Whether the Spirit and Oil of Vitriol be good in Fevers. XXIV.
The Medicines of Tartar are not universal Digestives. XXV.
When the crystals of Tartar, and when the cream to be given. XXVI.
The deceit in making of the Crystals. XXVII.
There is often more vertue in crude Tartar than in its Cream. XXVIII.
The efficacy of the Salt of Tartar. XXIX.
The correction of Tartar vitriolate. XXX.
To whom that and other Preparations of Tartar are hurtful. XXXI.
Whence the efficacy of volatil Salts depends. XXXII.
They very well prepare tough Phlegm. XXXIII.
The glutinousness of choler is excellently corrected by their means. XXXIV. and XLV.

The efficacy and correction of the Salt or Vitriol of Steel. XXXIV.

Steel is diversly to be prepared according to the nature of the obstructing Humour. XXXV.

How to draw out of it its several vertues, of binding, opening, purging and vomiting. XXXVI.

How the action of Chalybeates is to be promoted. XXXVII.

Whether Purgers may be given with them. XXXVIII.

Whether Cordials. XXXIX.

Cautions in the use of Chalybeates. XL.

How Nitre cools. XLI.

Oxymels and Hydromels are better than Syrups. XLII.

Dried herbs have other vertues than green. XLIII.

In the correcting of Phlegm Sugar and Medicines prepared with Sugar do hurt. XLIV.

An hurtful abuse of Wormwood. XLV.

When to be used for the concoction of the Humours, and the strengthening of the Stomach. XLVI.

Some Preparers are universal, others particular. XLVII.

How Choler is to be prepared. XLVIII. and XLIX.

The correcting of Salt Phlegm and Serum. XLIX.

How a melancholick cacochymie is to be corrected. L.

How atrabiliary Humours. LI.

The Correction of acrimonious Humours is various according to their difference. LII.

We must take heed lest in altering one Humour, the rest be injured thereby. LIII.

How to bridle the too great effervescence in the small guts and heart. LIV.

The Pancreatick Humour is to be prepared before evacuation. LV.

How to correct the too great fluidity, or the over thick consistence of the Blood. LVI.

I. The more Ancient Physicians, to whom many of the Moderns also assent, as they believed an elective Purgation, so they ordered a Preparation of the Humours previous and as it were necessary to it: on which account in Books of Practice, as often as a Cathartick Medicine is prescribed, a long series of Preparers destin'd for every particular Humour, is proposed in a solemn manner and with a certain pomp as it were: whose use although it be very specious, seems not at all profitable; because such Humours are not truly in being, as we have elsewhere clearly shewn. Notwithstanding seeing Purging is not convenient at all times, nor in every condition of the Body, to perform it right, both a fit time and some sort of preparation is requisite: and both these respect as well the first ways, as the mass of Blood. As to the former, if at any time the Stomach be either burthened with a load of viscous Phlegm, or be troubled with the effusion of turbid bile, Purging is often undertaken to none or ill purpose, unless these contents be either first swept out by giving a Vomit, or their burthening and effervescence be corrected by Digestives. And as to the latter, viz. the Blood, Purging is often unreasonable, and sometimes also incongruous, and in neither of these cases are those which are commonly called Preparers, but only Alteratives, convenient; because those imaginary Humours are not to be disposed towards evacuation, but the Blood itself ought to be reduced either from a troubled and confused to a sedate state, or from a weakness or dyscrasie to a vigour and equable temperament. When the Blood effusing from a Fever is disturbed in its mixture, Purging is always found hurtful, and therefore it is condemned by Hippocrates and the Ancients: and no less when its mass being languid and weak, rises not to a due Fermentation. Moreover when the Blood is beyond measure chole- rick, or watry, or is too much inclined to coagulations or fusions, Purgers are for the most part so far from removing such faults or depravation, that they oftener increase them. So that in these cases altering Remedies are rather indicated, those namely that may destroy the undue separations, or combinations of the Salts, Sulphur and Serum, and take away their other enormities.

II. Sometimes Nature is over-whelmed and choaked by the plenty of Humours; sometimes she is only pricked and irritated by their quality; or both of these happens, viz. that both the plenty of Humours, and also their hurtful quality oppresses Nature. Thus if together with a very great febrile effervescence the Patient feel wandering Pains in divers Parts, and also suffer divers changes of heat in his Face and other parts, so that one while some part of his face look red, and anon pale, and lastly be very restless, and ill at ease; which depends on the ferrous Humour irritated with a febrile Ferment; besides Bleeding and Purging, the cure must be begun with specifick antifebriles, and temperate Antiarthriticks, Diaphoreticks and Diureticks, which may, like Nature, precipitate the matter that infects by its quality: And at length when the Symptoms are allayed, the occasional cause is to be eradicated by Purging, and a relapse to be prevented.

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man m. m.
l. 1. s. 7.

III. Every alteration makes not the Humours crude, but only that, (if we consult Hippocrates) which is apt to cause a disgregation in them: for disgregation alone is thought to be the immediate cause of the Humours becoming crude. For whereas they may offend three manner of ways (as Hippocrates teacheth, *l. de N. h. v. 60.*) in Quantity, in Quality, and because they are disgregated from one another; neither a fault in quantity alone, nor a simple alteration as to quality are apt of themselves to breed crudity, for neither of them is corrected by concoction: for if the Humours exceed, or come short in quantity, we must only remedy it by evacuation, or repletion; for the Diseases that repletion causes, emptying cures, and on the contrary, according to Hippocrates. So neither does their fault as to quality make them crude, because, as Hippocrates says (*l. de v. Med.*) All these are thus cured, that those who are affected with coldness be heated, and those that are affected with heat be cooled; and these things are soon obtained, for there is no need of concoction. Seeing therefore neither a fault in the quantity, nor the quality can of it self introduce crudity upon the Humours, it is necessary to affirm that the Humours contract crudity only because they are disgregated or sever'd from one another. Wherefore, because Concoction is opposed to crudity, Hippocrates describing Concoction hath affirmed (*l. cit. de vet. Med.*) that it is wrought by a mutual permixtion and temperature, as it were by boiling. Now by Disgregation of the Humours we understand, not an exact separation of one from another, so that they occupy divers places, but a dissolution of that mixture by means whereof they are corrected and contempered to one another, and when it is dissolved, every one acts according to its proper virtues and qualities. By the means therefore of this disgregation is a Crudity introduced upon the Humours, which while they are reduced to their former Union and Concord, are said to be concocted. From which we may collect that not all Diseases, that depend on the abundance or alteration of the Humours, shew signs of crudity or concoction, but only those wherein is the aforesaid Disgregation: And this, Hippocrates (*l. de vet. Med.*) would intimate to us, whilst reckoning up the Diseases that are cured by concoction, he only enumerates Fevers, Tubercles or Tumours, and Detillations: for these Diseases do necessarily presuppose a Disgregation of Humours. Therefore Concoction is in vain to be expected in those Diseases wherein, seeing the Humours were never crude, they are in like manner unconcoctible; and far less in the Humours of the healthful, whom we intend to Purge for prevention: for in these, only the width of the ways is attended to; which Hippocrates meant (*in Aph.*) When Bodies are to be Purged, they must be made fluid. Reducing which Precept to Practice, he uses before Purging, both drinking more largely

and bathing, or fomenting all the Body over; this latter chiefly before he would Purge downward, and the former, when he would Vomit. ¶ Whereas there may be many causes of Disgregation, I find them all reduced to three heads in the Doctrine of Hippocrates 1. When any Humor is so much increased in the Body, that it far exceeds the rest in plenty; 2. The second cause is motion, or perturbation and agitation; 3. A notable alteration as to the first qualities chiefly. Now that the Humours may be disgregated through the excess of one of them as to quantity, is consonant to reason, so that it refuseth to be associated and contempered to the rest, as excellency of them. Hippocrates shews us this cause of disgregation *l. de insomn. v. 31.* For by some repletion, says he, made within, there happens a certain secretion that disturbs the Soul: where by secretion he understands not any evacuation, but the aforesaid disgregation. But concerning the causes thereof we must note; that these sometimes cause a Disease of themselves and primarily without disgregation, sometimes by its means, otherwise there would only be one cause of Diseases. The first cause therefore is the excess of any Humor in quantity. And that the Humours are disgregated through motion (which is the second cause) Hippocrates teacheth (*4. de morb.*) by the example of Milk, by the agitation whereof the Butter, Whey and Cheese are separated. And lastly, that an alteration as to qualities makes the same disgregation, is shewn also by the example of Milk, which is conglobated (or curdled) upon pouring Liquor into it, not by coldness alone, as Hippocrates would, but by any great alteration that may proceed to corruption of substance: thus Milk is curdled with excess of heat, without Runnet. When therefore the Humours are so altered as to their proper qualities, that the alteration tends to the destruction of the substance (this is said to difference it from simple alteration, whereby the Humours are not removed from their natural state) their natural union is dissolved, and they are disgregated from one another; so that although every one remain in the same place, yet each is rendred intemperate as to its proper nature.

Franc. de le Boë Sylvius seeks the causes of Crudity and Concoction in a looser or stricter union of the excrementitious Humours with the Blood. He says (*Prax. l. 1. c. 55. §. 16.*) Physicians mean the Crudity and Concoction of the Humours that constitute the Mass of Blood and are mixt with it, when they treat of them in the Examination and Cure of Diseases, especially the acute; and when they so greatly and deservedly desire the concoction of the Humours; that the Cure may succeed according to wish: for as often as the Blood is infected and evil affected immediately, or by intermediate Humours contained in the Body without the Mass of Blood, viz. choler, the Pancreatick juice, Lympha and Phlegm, so often the vital effervescence that is peculiar to it, is altered & vitiated likewise, and that so, as that presently more or less there is a disturbance of that natural and loose confusion between the Blood & those Humours that flow continually with it to the Heart, whether they be then joined to it more faintly and intimately, or more loosely and less intimately. Now when the other Humours are joynd to the Blood more intimately and strictly than usual, then a more watry Urine is made, and such as has less tincture and other contents, and this they call Crude, that is, a sign of crudity: But after that the Urine by degrees becomes more tinged and brings more contents with it, it is commended and is called concocted, namely signifying that concoction is more or less begun or promoted: which comes to pass as often as the aforesaid humours, as excrementitious and before too strictly and intimately united to the Blood, are by degrees separated from it again, and are partly expelled

Idem l. de
Nat. hum.
v. 272.

expelled together with the Urine; which is good and profitable for a man, as the other was bad and hurtful: for according to Nature and in an healthful State, the Urine has something at least of a Yellowish tincture: but no content is found in it, unless some error be committed in Diet, or a mans constitution decline more or less from a perfect State of Health. Now if any one do attentively consider all the Humours in the Body that are to be confounded with the Blood, as also the proper qualities of each, he will easily come over to us, and will grant that their stricter union with the Blood is owing to an Acid, and therefore to the Pancreatick juice or *Lympha* ill affected: On the contrary, that their looser Union with the Blood, and so the loosning of the Stricter, is to be hoped and expected from a *sal lixivium* and especially a Volatil, and so from a bitter, and therefore from Choler when it is more powerful and has the dominion. Daily experience confirms how true these things are which I have now said, seeing it may be known to any who observes those things which cast the Healthful into divers Sicknesses, and increase the same, and on the other hand which restore lost health to sick Persons, that the concoction in the Blood is hindered by the Vertue of Acids, but such as are excessively so: and that the same is promoted and obtain'd by the help of Aromaticks, and in particular of bitter things, or volatil Salts, but such as are more temperate. (See concerning the signs of crudity from Urines, loc. cit. § 14.) The watry Urine, which is a sign of crudity, that is, of deficient concoction in the Humours of the Blood, as often as it continues and a Spontaneous concoction by Nature is expected in vain, so often is it to be promoted by Art, and that by Medicines that kindly temper all acrimony of the Humours, but chiefly the acid (whence the too intimate mixture of the Humours in the mass of Blood uses to proceed) and such as will loose again their over strict union. The fixed Sulphurs of Minerals and Metals being exalted to their greatest Perfection, do above all other things gently temper all acrimony of the Humours, even the acid also: Next to these are volatil oleous Salts, and to these, Aromaticks, by the vertue of which being prudently used, exceeding even imagination in many things, there is not only obtained such an effervescence of subcontrary Humours in the small Gut and Heart, as is most agreeable to Humane Nature, but the preternatural concretion and union of the two acrimonious Humours, being first moderated by them, is dissolved again in the Blood. I declare from Experience that these things are to be esteemed of great moment in Physick. Idem § 78. and 79.

IV. *Trallianus* (L. 5. cap. concerning a Diarrhoea from obstructions) does not grant oxymel for preparing the Humours that are thick through adustion, but that are thick through crudity. For the things that are thick through adustion, are made thin if you dilute them with liquids; thus dirt is made thin by mixing it with water, and choler made Vitelline (or like the yolks of Eggs) by assation, by a cold and moist Portion becomes thin and liquid: but the things that are thick through crudity, or the admixture of a thick Humour, such as is vitelline choler in a bad Tertian, are made thin by heating things, that attenuate the thickness of the substance, and incide the channels; thus we incide and attenuate vitelline and thick Phlegm by Oxymel and Honey of Roses.

Wal. m. m.
P. 94.

V. When the whole mass of Blood offends in quality, we may change it also with external Alteratives, Epithems and washings of the hands witness this.

VI. There are some Practitioners that always alter and never Purge: That we may know whether Alteration ought to be made, we lay down these Rules: 1. All alimentary Humours ought to be

alter'd when they abound: 2. And the excrementitious Humours (1) which are so mixed with the mass of Blood, that they cannot be separated; (2) In burning Fevers, in the greatest heat and motion of the Blood, the vicious Particles are so exactly mixed with the good Blood, that they admit of no separation: whence it is absurd to intend to Purge in the augment or state of these Fevers: (3) When excrementitious Humours so abound, that they cannot be drawn out without present danger of life. 3. Those excrementitious Humours refuse alteration that are severed from the mass of Blood. Idem p. 102.

VII. Let none trouble himself in vain with thinking as many do, (who are moved more by Reason than Experience) that all Medicines can be taken safely only when the Stomach is empty of Meat, seeing I have found the contrary true in many, especially as to Medicines that alter and correct the Humors: For I have observed a thousand times that Alteratives, namely the gentle, for such only I would have Physicians to use, have been used with greater benefit of the Patient, a little before or after Meals, yea at them, than at other times. Nor is reason contrary to this experience, for so the vertue of the Medicine does kindly mix and insinuate it self not only into the *Saliva* in the Stomach, but also into the Ternary of Humours that flow together in the small Gut, yea into all the Blood also and all the other Humours in the right ventricle of the Heart, and in all the Arteries and Veins: whereby the desired amendment and correction of one or all of them is the sooner, more easily and happily performed. Franc. Sylv. Pract. l. 1. c. 34. § 102.

VIII. Thick Humours cannot flow, and they are either tough, or slimy, or dense: The sliminess of the Humours is known from the Urine, when some white stuff sticks closely to the Chamber Pot. The thickness of the Humours is corrected by acid and hot things: whence in many Fevers all we give is to no purpose, unless we mix hot things therewith: Yea it may chance, that when a Physician has not been able to cure a long Tertian, prescribing to his Patient nothing but tedious cooling Apozems; an old Woman coming bids him take a draught of Wine to comfort himself, and the Patient is recovered. Walaeus m. m. p. 104.

IX. Preparation is always necessary before purging except in two cases: 1. if the matter be turgid; 2. if it be thin, such as is the cholerick and serous, which easily yield to any attracting Remedy. But it is questioned, whether thin Humors be to be prepared, that is, incrassated: for the Humours cannot be evacuated unless they be concocted, but concoction incrassates, as Aristotle 4. met. teacheth. Concoction, says Avicenna, is a certain ad-equection and reduction to mediocrity: if therefore thin Humours be to be concocted, they are to be reduced to mediocrity, and therefore to be incrassated. Besides, thin Humours easily elude the vertue of the Medicine, which working by compressing the Vessels, thin Humours will be apt to escape. But on the contrary thinness of the Humours is requisite for evacuation; for thin Humours pass out of their own accord and resist not attracting Medicines, as Galen teacheth, 3. progn. 23. and in other places. We must say that to a due purgation three things are required, 1. An effectual Medicine given in a due dose, time and manner. 2. The ways ought to be open, otherwise there is either no purgation, or such as is troublesome. 3. The Humour ought to be disposed, and it is so if it make no resistance against the Medicine, as if it be not tough, thick, clammy, or mixt with the Blood, or other Humours whereby its motion may be hindered. Therefore thin Humours are in their own Nature most easily purged out; but, they are mixt either with the Blood or other Humours; or the ways may be shut and obstructed: wherefore these

are

are to be opened; and then the Humours to be evacuated are to be separated from the rest. Now concoction is twofold: one wherein the Humours are reduced to benignity, that they may nourish; the other wherein they are made apt for expulsion. If we speak of the first, we must concoct thin Humours that they may return to mediocrity, therefore they are to be incrassated: If of the second, thick Humours are rather to be attenuated, because they resist that which would move them, but not the thin, because they are easily moveable, as *Galen* in the fore-cited place teacheth. But if thin Humours be mixed with the Blood, they ought first to be prepared: and whether they be so, is known 1. by the Blood that is let, if much ichor separate from it; 2. When these Humours are separated, there ensue Itchings, Blains and Scabs; 3. If the Urine be ruddy and thick, it is a sign that thin Humours are mixt with the Blood: but if it be plentiful, thin and clear, it is a sign they are separated and prepared.

XI. Whether ought an altering Medicine in one dose be so strong, as the quality that it should change in the Body? I answer, if it can reach the part affected, and that without the hurt or prejudice of the adjoining parts, then it is altogether lawful: so a beginning *Erysipelas*, that has seized but upon one part, may be presently expelled by a strong cooler, and the heat of the Stomach likewise: But if it cannot conveniently reach to the part affected without having its virtue weakened, and without the hurting also of the neighbouring parts, we must alter by giving the Medicine at several times.

XII. Let Alterations be made leisurely, so as not to begin at the highest degree, that is, the third: sometimes we alter in the fourth: But let us begin at the first, and proceed from the first to the second; from the second to the third, if the two first will not doe: otherwise the highest degree would easily become familiar to Nature, and afterwards she would not be helped by weaker things.

XIII. We cannot alter every thing with every Alterative, for alteration is made by conjunction and perfection: hence if Medicines be to alter 'tis necessary that they be mixed with the Humours to be altered, if they require to be mixed: they ought to be like to the Humours, not in respect of qualities, for so they ought to be contrary, but in respect of the constitution. Therefore let those things that are oily in our Bodies, be altered with oleous things; the watry with watry; the Salt with Salt: Nor need we add hot things to hot, if we say that Salt things are to be added to Salt, for there are Salt things which are cold, such as Nitre and Borax.

XIII. During concoction, retentions of the excrements are profitable, and evacuations hurtful, as being contrary to concoctions. Wherefore we must than their practice who by continually soliciting evacuations by Clysters and other Remedies, give no leave for concoction.

XIV. The bilious Humour requires cold preparers: yet these do so hinder purgation, that we must sometimes abstain from them, especially just before it is time to purge. On which account even in cholerick and acute Diseases, we must seek for an opportunity to give hot Medicines, as the decoction of wild Majran, Penniroyal, &c. We shall therefore use cold syrups for the Acrimony of the Humours; but things that attenuate and incide when we would only make the Bodies fluid, to wit just before purging.

¶ *Choler*, both the natural excrementitious, and also the preternatural, and the excessive Sulphureous oleous parts of the Blood, in a word, a bilious cacochymie, as it offends by its heat, is digested by watry diluters, sharpish; and other temperate

things: but if it be too tough, also by inciders, and bitter things, as in the Jaundise; if too thin, by sharpish, and earthy mucilaginous things.

¶ *Choler* is to be temper'd both on the account of its Acrimony, and on the account of its volatility increased. The Saline lixivial Acrimony of the *Choler* is most powerfully temper'd by acid and sour things; more gently by oily and spirituous, which yet often it is not safe to use, seeing they are apt to increase and cherish the burning of the Bile and Blood, unless the *Acid* be first fixed. Therefore the only safe temperers of the Acrimony of *Choler* will be acid and sour things, such as are amongst vulgar Remedies, Sorrel, Wool-Sorrel, Plantain, &c. amongst Chymical I commend Alum and its Spirit, as also the Spirits of Vitriol, common Salt, Nitre, Sulphur, &c. distilled Vinegar, as well simple as prepared with other things. The too great volatility of the *Choler* may be diminished by fixers, and especially by the even now mentioned acid and sour things, amongst which the Spirit of Nitre is perhaps the principal, excelling all other acid Spirits in fixing.

XV. We must see that the unpleasantness of Apozems be not troublesome to Nature: for it often happens that the Remedy is ungrateful to Nature, and does more hurt by spoiling the appetite and overturning the Stomach, than good by the impression of its virtues: which neither does it bestow intire, seeing through its ungratefulness it suffers a repulse from Nature, and cannot be brought thither whither it was directed by the vehicle. Therefore the Ancients out of so great a multitude of Remedies, chose and brought into use a few that might allure Nature by their sweetness, and by their pleasantness might imprint their virtues more deeply, whilst they should be received into the more familiar embraces of Nature: for Nature refuses unpleasant things, as we may see in aliments. Moreover they are to be disallowed, when they are prepared besides the purpose for opening obstructions of the viscera (to which the cause of the Disease is not referred, but to the stoppage and conipation of the pores of the Skin) whence there is a retention of fuliginous excrements, which is followed by putrefaction. Add hereto, that whereas they chiefly provoke Urine (for of this virtue are the opening roots, therefore called diureticks; capillary herbs, the cold Seeds, &c.) they are unseasonably administered in the beginning and augment of a Fever (and they are given at no other time now a days) whereas Diureticks should never be administered in these, but when the matter is concocted and the Disease in its declination. Besides, it is ridiculous with so great labour and cost to prepare a Remedy that is unpleasant and of an uncertain effect, when we may with great security and freedom use with an ease boiling and light expences those things that have been approved by the Ancients and confirmed by the Moderns. Omitting those therefore let us use Mead, Oxymel, &c. Oxymel alone is commended as resisting putrefaction, attenuating thickness, exterging clamminess, penetrating to the Skin and not encreasing the Fever; nor will it rake the Guts or cause coughing, or affect the Nerves, if you lessen the Vinegar, and increase the Honey. In the Melancholick, and in Hysterical women, Mead is to be made use of; and if it seem to turn to choler, make it very dilute of the waters of Endive, Succory, &c. or instead of Honey, use Sugar, &c.

XVI. Those plainly doat that order a great quantity of Herbs, Roots, &c. to be boiled in the water of Barley thoroughly boiled: for a thorough Decoction of Barley is Pisan, and it has too solid a consistence to admit the consistence of so many things: And if you boil it more slightly, the water will be flatulent; and it will also make that promiscuous decoction soon apt to corrupt. ¶ *Mar-*

G. W. we
del. def. m.
fac. p. 123.

Sylv. de le
Boe
Append.
tract. x.
p. 711.

Primitiv. l.
2. de Feb.
c. 9.

J. Walzau.
m. m. p. 93.

Idem
p. 95.

Idem
ibid.

Vallef. m. m.
l. 2. c. ult.

Merc. de
praed. med.

Augere.
Ferrer.
castigar.
p. 141.

Mar-
tial

Idem
422. 28.

ian denies that a slight Decoction of Barley is flatulent.

Idem
ibid.

XVII. Those that in acute Diseases continue laxative Apozems, enervate the strength, and deviate quite from the true way of curing, which commands that at the beginning we should lessen the matter, afterwards incise the thick things that obstruct, and deterge the clammy and open the obstructions themselves.

Johan. Crato
Confil. 37.
apud Schol-
ezium.

XVIII. The Body will be soluble or slippery, if on the day before the Patient is to take an Infusion of Senna or other Purge, he take a Clyster of the Decoction of Fluellin mixed with Capon or Cock broth and a little Sugar added: this will do more good than if he weaken his Stomach for many dayes with Syrups.

XVIII. By the long use of Apozems that dissolve Phlegm, the Phlegm which plentifully stagnated in soft Bodies especially of Women and Cachectick Persons, is first attenuated, then dissolved into water, which descending by its weight fills the capacity of the lower Belly; which we see happen through the unwary giving of Purgers, whereby the Belly is so swelled that all think there is a Dropsie. Wherefore that Patients that are full of thick Phlegm may not incur this danger, let the Skilful Physician daily before he gives his Apozems premise a little of the troches of Wormwood, of Capers, of Maudlin, &c. That some have fallen into a Dropsie by Syrups that have been too inciding, is noted by Averroes 7. Collig. Henric. ab Heers Spadaer. cap. 10. Heurn. Meth. l. 3. c. 7. and l. 2. c. 17.

XIX. There is a new but wholesome way of infusing Herbs in Fevers, where there are great obstructions: for Infusions pass into the Veins more easily than either decoctions or distillations. Now this infusion is twofold, one when the Medicine is put into hot water, and the Vessel presently shut, and we set it upon warm ashes, to continue the warmth of the water; and then it is strongly strained out; the other is more ineffectual, when we put it into water that is not hot, and let it stand therein for a Night, &c.

Heurn. meth.
m. l. 1.

XX. All distilled waters are cold, even the water that is distilled from the hottest simple, as suppose from Calamint, which bites the Tongue like Pepper, and yet heats not but cools: And I have seen some that have been inflamed by drinking the decoction of the Indian wood, to be greatly cooled by Calamint water. ¶ As much as may be let us abstain from distilled waters as from those things that are very offensive to the Stomach.

Montan.
Confil. 42.
Claud. l. 2.
de integr.
c. 6.

XXI. The Ancients gave tedious decoctions, long Infusions and Apozems: the Moderns consulting for the delicate, and curing per compendium, prefer before these, digestive powders of Magisteries, Sil's, Essences, and divers other preparations. Horstius (tom. 2. p. 193.) in the Hypochondriack Melancholy prescribes this for a digestive: Take of the Magistery of red Corals a scruple, of the Magistery of the Spongestone half a scruple, mix them; Give this in a decoction of Turnips with the rinds on, that through the bitterness of these the decoction may open, penetrate and incise the more powerfully.

Hoffm. Herc.
med. l. 3. c. 3.

¶ If any that is taught to understand more than the vulgar shall bend his mind to Chymical preparations, and more effectual Remedies, and therefore more safe, if so be they be rightly administered, we will commend to him both Tinctures and Extracts, and also oils prepared by art, likewise Volatil Salts, but chiefly oleous, to be got by art out of most parts of Animals, and convenient for use: Which being generally less ungrateful than the vulgar Medicines, and taken in a far less quantity, and operating more quickly and kindly, and also more effectually than they, are deservedly desired by the sick that are afflicted enough of themselves: so that it is unbecoming a Physician that would be esteemed compassionate, yea it is inhumane, not to be

willing to help, when he can, the infirmity, loathing and nausea of the Sick by a more grateful Medicine, but to chuse rather to be continually adding affliction to the afflicted. Wherefore I think the more kind are to be preferred before those surly Physicians, and a compliance is to be made both by the Physician and his Medicines to the natural infirmity, and sometimes peevishness of the Sick, &c.

Fr. Sylv.
Pract. l. 1.
c. 34. §. 103.

XXII. Those err, who for cooling Alteratives give those things that are very commonly eat, as Succory and Lettuce; I say they err, because Nature being used to them has contracted such a friendship and familiarity with them, that there is no strife betwixt them, and consequently no benefit to be expected. For some when they are well, will eat a whole Plate full of Lettuce or Succory every day, and therefore 'tis an idle thing to believe that Men who have for a long time been nourished by Lettuce and Succory, can be cooled by two or three leaves.

Sanctor.
meth. l. 4.
c. 13.

XXIII. J. B. Sylvaticus (Contr. 46.) rejects the use of the Spirit of Vitriol in Fevers, because it may coagulate the tender flesh, and prejudice the substance of the part by dissolving the primigenial moisture, 1. Because Galen and Dioscor. say that it partakes of a corroding and septic quality. I answer, In the preparation many parts of the Vitriol are separated from the Spirit, whence we cannot observe all the effects in the Spirit that are seen in the Vitriol intire; and some may be seen in the first that are not taken notice of in the latter. Vitriol vomits, the Spirit stays vomiting. So Sulphur is inflammable, its Spirit not so, yea it rather resisteth a flame. The Spirit of Vitriol hath an eroding faculty if given alone, but that is common to it with other Liquors, as Vinegar, the juice of Citron, &c. Your Acidule or Mineral Waters are drunk with profit, that have their vertue from Vitriolick Spirits: It is safely given in convenient Liquors. Its hotness is corrected, while its particles are severed by a mixture with Water or other Liquors, in that proportion, that an hundred particles or atoms of Water are mixed with ten or twelve of the Spirit. 2. The Medicine was not known to Antiquity; yea Galen suspects the use of Vitriolate waters in putrid Fevers, because being applied to the Skin, they both cause an asfriction of its pores, and too much heat the Body.

x. m. c. 2.
11. &c. 9.

Ans. We must not therefore reject it because it was not known to Antiquity. Galen disallows of the external use of Vitriolate Waters, because they constringe the Skin. 3. He says there are safer Medicines. Ans. The Spirit of Vitriol is safer if it be taken in a due quantity: That it has done good in Fevers, there are innumerable witnesses; few say that it has done hurt: It does not as yet appear that there are safer Medicines. 4. The too great asfriction that was in the Vitriol, is also in the oyl; now asfringents do harm in putrid Fevers. Ans. The asfriction in the Spirit is not so great as to do harm; there rather seems to be none in it: all acids do not asfringe; yea they attenuate, deterge, take away obstructions, loosen the Belly: it cures the flux of the Belly, not by binding, but by strengthening and condensing: there proceed indeed effects from densation, that are like to asfriction, but are not: asfringents and acids are different. But suppose it asfringe, there is no danger from thence, for the inciding, attenuating and opening parts are by far the more powerful. 5. Vitriol is poyson, according to Dioscorides. Ans. It is Poyson in a large sense, in which all things that kill by their quantity are called deleteries, &c. Rolsim. Ep. de febr. c. 136. where more objections are made. ¶ Spirit of Vitriol being given indecently and too long, puts on the nature rather of a Poyson than a Medicine: Being added to Humours that boil already enough of themselves, just

as

Rolfinc. conf.
a. l. 4. p.
405. as if you mix this Spirit with the Gall of some Animal, it causes greater disturbance, and procures a quicker ascent of vapours.

XXIV. Chymists make Universal and general Digestives of Tartar, as 1. Its cream and Crystals, 2. The magistery of Tartar vitriolate, 3. *Mistura simplex*: But these are not truly such, it is safer to rank them in the number of particular Digestives. They are not good in a bilious Cacoehymie, and for salt, sour and acrimonious humours: In those they may increase the ebullition and do harm. They are more profitable for a simple cacoehymical melancholy, but not so good for a Pontick and Acrimonious, which has the seeds of fire in it: As much as they avail to incide thickness, so much they irritate fervid and adust humours and hurt by inflaming. They are in some sort good for phlegmatic humors.

Rolfinc.
meth. gener.
Sec. p. 477.

XXV. The Cream and Crystal of Tartar absterge, incide thick and tartareous Humours, open obstructions and loosen the Belly; and either of them is a pleasant Medicine, if a drachm thereof be given in the broth of flesh, or in boyled water (with a little butter in it) with three, four or five grains of *Diagridium* or extract of Scammony; it will give the liquor a somewhat acid taste. The Crystals are not so acid nor so diuretick as the Cream, and therefore they are safer given when the body is not purged: the dose is from a scruple to a drachm.

Sennert. Epist.
28. cent. 1.

XXVI. As to the Crystal of Tartar, let the younger Physicians note, that it is of greater efficacy than is commonly believed, seeing we seldom make use of it in our practice through the carelessness of Apothecaries and deceit of Pseudochymists, or those common distillers that sell chymical Medicines to Apothecaries, none whereof almost is sincere, but all adulterate. The carelessness of Apothecaries is for the most part so great, that they chuse rather to buy the Crystal of Tartar of those distillers than make it themselves (though no preparation of Medicines in the whole art be easier) because it is sold them at a low price, whereas it would stand them dearer to make it. Now the cheat lies in this, that those Impostors put in their decoctions but a little Tartar and a great deal of Alum: not that Tartar is dearer than Alum, but because Tartar yields but a little quantity of Crystals, whereas Alum will all of it run into them. Hereby are Physicians disappointed of their end, seeing Alum is indued with an astringent vertue, that is contrary to the opening faculty that is desired by them. And another hurt is done this Medicine, that this sort of Crystals is drawn out by decoctions made in Brass pots, whereby the malignant quality of the Brass is imprinted upon the Medicine: For it is a very well known and vulgar precept of pharmacy, that acids be not boyled in brass vessels, because they easily penetrate, and draw a certain tincture from the brass that is very hurtful: But the Crystals of Tartar are very acid, and by some are named *Acidum Tartari*: And yet this error is very commonly committed even by the Apothecaries themselves; for almost all that make these Crystals with their own hands, use brass vessels; so that I have seen some Apothecaries have Crystals of Tartar of a Sea-green colour, from the Verdegrieze that had been drawn from the Vessel wherein they had been made. Therefore Physicians will consult for their own conscience, for their esteem and the health of their Patients, if they make Apothecaries make the crystal of Tartar with their own hand, and in Glass, Iron or earthen Vessels.

River. pract.
l. 11. c. 4.

XXVII. Though I leave every one to his own judgment and experience in the use of Tartar; yet by long use I have found that there is more of an opening and loosening faculty in Tartar itself than in its cream or crystals drawn by the solicitous

hands and thoughts of Chymists; seeing in boiling and by so many washings its purgative vertue that rests chiefly in its earthy and saline parts, does most of it vanish into the thin air. I prescribe opening herbs, that are destin'd for the Spleen or Liver to be boiled in portage, with the addition of a spoonful of white Tartar cleansed by washing only and dried.

Heest. obs. l.
de Mayenne.
Tr. de Arthre.

XXVIII. The Salt of Tartar has a great opening vertue, and may profitably be put in opening Apozems, Opiats and Pills: but its principal use is in a loosening Ptsan, which is made of two drachms of Senna infused in eight ounces of cold water, with a scruple or half a drachm of Salt of Tartar, whereby the Tincture of the Senna is powerfully extracted, so that this ptsan purgeth far more strongly than the common; and being continued for many days, looses all obstructions; from which effect I have known stubborn Quarrans often thoroughly cured by the use of this ptsan continued for fifteen days. If you fear the Acrimony of the Salt of Tartar, it may be corrected with the Spirit of Vitriol or Sulphur, as for half a drachm of the Salt let there be fifteen drops of the Spirit.

Bois. coll.
l. 1. c. 11.

River. Pract.

XXIX. Of the Spirit of Vitriol with the Salt or Spirit of Tartar is made *Tartar Vitriolate*, which incides and attenuates cold and viscous Humours, concocts crudities, opens obstructions and cleanseth away the sticking matter; and does all these things very effectually. For if the Tartar of Wine have of it self no small vertue to open and absterge; if Vitriol alone do this, as natural acid and vitriolate Waters demonstrate, which are very profitable in all Diseases that spring from obstructions; much more is this to be granted to Tartar vitriolate, where prepared and very well purified oyl of Tartar by pouring oyl of Vitriol drop by drop upon it, is fixt not without exandescence. But it is to be observed that if it be exactly prepared according to *Crollius*, it will create a nausea, and in the more delicate often cause a vomiting, through the over great quantity of the oyl of Tartar in respect to the Spirit of vitriol. Therefore it will have the better operation when equal parts are taken.

G. Hoff.
Dec. 9.
probl. 5.
where is another preparation.

XXX. The cream and crystals of Tartar and Tartar vitriolate are so common at this day, that many hardly prescribe any Medicines without putting some of these in them. Yea *Crollius* calls *Tartar Vitriolat* an universal Digestive. And I confess indeed that Medicines made of Tartar have a very great vertue in inciding and attenuating Melancholick and thick Humours, and therefore in opening obstructions. But whereas it often happens that in Hypochondriack Melancholy there are often found black choler and Salt and sour Humours, and such as are altogether Acrimonious and have the Seeds of fire as it were in them; surely Tartar Vitriolate and such Acrimonious Medicines are not proper for such Humours, seeing they do not blunt their Acrimony: but those are rather to be used which temper the bad qualities of such Humours, and contrary qualities are to be opposed to contrary. When sometimes there arise dreadful Symptoms from the use of Tartar vitriolate, as Vomiting, a pain at the Stomach, &c. it is not to be imputed to the Salt of Tartar, but often to the impure Spirit of Vitriol.

Sennert.
pract. l. 3.
p. 3. c. 3.

Rid. Hoff.
clavis Schrou.
p. 610.

XXXI. Seeing volatil Salts may be drawn from all the parts of man with small trouble (whereof therefore I conclude they consist) none ought to wonder that amongst Alteratives and correctors of the depraved Humours of Men I often praise and commend *Volatil Salts*, but such as are mild, whereunto here also I deservedly give the preference in correcting and amending the hurts accrewing from the air any way infected, or from bad aliments that stay in the Body, &c.

Fr. Sylv. de
le Roc. p. 21.
407.

Mem ap-
pend. Tr.
§. 9. 371.

Mem pract.
l. 1. c. 30.

Idem c. 43.
§. 17. &
18.

Wedel.
libid.

Idem c. 44.

River. pr. l.
12. c. 5.

XXXII. *Viscid Phlegm* is incised both by all Aromaticks and things that abound with a volatil Salt, and also by Acids, and most effectually by Aromatick Gums, as *Galbanum, Sagapenum, Ammoniacum, Bdelium, Opopanax, Mastich* and the like. ¶ Volatil Salts being taken for continuance, even together with meat, are good to prepare *tough Phlegm*, as not only incising and correcting of it, but driving part thereof to the ways of the urine and expelling of it in the form of sediment, which yet fails by degrees in the urine, and on that account yields an undoubted sign that the phlegm is corrected and overcome for the greatest part. ¶ Nothing does so incise and correct a too glutinous, rough and clammy Blood, as any volatil Salt, used for a continuance at any time at dinner and supper with Wine, &c. Seeing every Chronical and tedious distemper draws its original from a phlegmatick Humour, at least has the same joined with its cause, which yields to no Remedy more easily or sooner than to volatil Salt used according to art. ¶ Phlegm, as it is a concrete Serum, so it requires attenuaters, heaters, resolvers, or things that make it fluid with moisteners. But note that we must not dry too much, for so it becomes more concrete: whence besides Aromaticks and bitterish Acids, as Spirit of Vitriol, Phlegmaticks are very good, yet not omitting heaters and moisteners.

XXXIII. I have learned by some years experience that the consistence, and from hence the glutinousness of the Choler, as also of other Humours in the Body are increased by the frequent use of austere or sour things, and on the contrary that the same are lessened by a continued use of volatil Salts & Acrimonious Aromaticks.

XXXIV. The Salt or Vitriol of Steel gains the preference of all other Remedies, because it opens obstructions, strengthens the *Viscera*, and corrects an hot intemperies: the dose is from twelve grains to twenty with a Syrup or conserve, &c. The ungratefulness of its taste is amended by making it up into pills with the mucilage of Gum tragacanth. Let it be of constant use, and therefore prepare a great quantity. We give you here an easie preparation, that cannot be compared by *Beguin* and others: take of oyl of vitriol or Sulphur half a pound, of the Spirit of Wine a pound, pour them into a new and clean frying pan (or Iron dish) and cover it with a Board: within fifteen days there will be a saline concretion, which set in the sun, that it may be thoroughly dried, moving it now and then with an Iron spatula: in the winter it may be dried over a very weak fire, or in a stove: when the Salt is very well dried, put it up in a glass phial well stopp'd; for if it be expos'd to the air, it is apt to grow moist. The pills made of it with the mucilage of Gum tragacanth will be made harder by adding a little of the Powder of the Gum it self: and when they are made up, keep them in a glass, that they wax not moist. This Remedy may be continued for a month, or longer with great benefit.

XXXV. The vertue of Chalybeate Medicines depends on the different manner of resolving and laying open the particles of the concrete (or Steel) and of their being exerted into act. For steel or Iron consists chiefly of Salt, Sulphur and Earth; it is endued but very slenderly with Spirit and water: Now the particles of the former elements, especially the Sulphureous and saline, being combin'd in the concrete with the earthy, remain altogether fixt and sluggish; but being loos'd and pulled from one another, they are of very great efficacy. The foresaid particles are loos'd two ways, either by art, or by Nature, after they are taken into the body; for a metallick body is wont to be corroded and dissolved by the ferment of the Stomach, as by a Chymical Menstruum. The most simple way of preparing Iron (or Steel) is a dividing of its body into small integral parts

by filing, which parts retain the nature of the whole, and contain sulphureous and saline bodies combined with other earthy. The filing of Steel being taken inwardly, is dissolved by the ferment of the Stomach as by an acid Menstruum, the signs whereof are as well the sulphureous and nidorous belching, (like that when one has eaten Eggs boyld hard) as the blackness of the dung which is caused by the Steel dissolved within in the *Viscera*, that perform concoction: the active particles both sulphureous & saline fly plentifully out of the concrete, and benignly involved in the nutritious juice are conveyed into the Blood, which being of a contrary vertue, do often both of them as with joynt forces conspire for the profit of the sick. The sulphureous particles being conveyed into the Blood add to it a new and more plentiful store of Sulphur, so that its mass, if it was before poor and effete, does now ferment more briskly in the vessels, and being further kindled in the Heart acquires a more intense heat, yea and a deeper colour. For thus we may observe in very many that are affected with the *Leucophlegmatia* and Green-sickness, whose countenance is pale, their Blood cold and watry, that by the use of Steel they acquire a fresher and more florid countenance, their Blood being died with a deeper tincture and colour. Moreover from the filing of Steel dissolved in the Stomach the saline particles are also separated, and have often a notable effect both upon the solid parts and humours: for these being of a vitriolick and styptick nature, do asfringe and corroborate the two loose and debilitated fibres of the *Viscera*, and so restore their vitiated tone: Besides, these saline particles restrain the impetus of the Blood, hinder its too great heat and frothy turgescence, and keep it in an even circulation: moreover (which is their principal vertue) they contract and straiten the over loose, open and gaping mouths of the Arteries, so that neither the Blood nor Serum can issue forth, nor is the thread of the circulation broken off. On which account in the dropsie and hemorrhages Remedies partaking of the saline particles of Iron are of the most famous use and efficacy; for many diseases proceed from this cause, that the mouths of the Arteries being too open and the interstices of the vessels over loose, the Serum or Blood burst forth; which diseases are often cured by the vitriolick particles of Steel, which constringe and corroborate both the Blood-vessels and nervous fibres. Thus the filing of Steel being taken inwardly seems both to spur and bridle the Blood: but inasmuch as the incitation wrought by this Medicine is far more powerful than the restriction, therefore it ought to be given only to those whose Blood is very thick and cold, as to rustick and robust persons; in a very hot and spirituous Blood and hot *Viscera* it is not at all proper. Besides in persons more delicate and of a tender constitution there is danger, lest the particles of the Steel, seeing they cannot be sufficiently dissolved, should strike into the membranes of the bowels like pieces of glass, and sticking firmly to them should produce deadly ulcers and gripings; which I have known sometimes to fall out really. 2. Next to filing of Steel let a second way of preparation be calcining it with Sulphur; namely let a roll of Brimstone be held to plates of Steel made red hot, that the Metal may melt to pieces, which being again calcin'd to consume the sulphur, and ground in a Mortar, are brought to a fine powder that is of excellent use. In this preparation of Steel the sulphureous particles do indeed exhale, the sign whereof is, that this powder upon pouring an Acid liquor upon it boils and waxes hot far less than the filing of Steel; yet when one takes it inwardly, a Sulphureous nidour is raised from it. In the mean time in this preparation the saline particles seem to be a little increased

creased by new ones that accrew to the red hot metal from the Sulphur, so that the active particles of both kinds, namely both Sulphureous and Saline, come almost to a poise: and seeing by this means this Medicine, (the compages of the metal being loosed) may be very subtilly powdered, it becomes of far more excellent use than filing of Steel. In most cases where Steel ought to be given in substance, as in a Cachexie, the Green-sickness and the like, it is convenient to use this Medicine. 3. In the third place comes the preparation of Steel with Vinegar; namely the filing of Steel is to often besprinkled with Vinegar, and dried, as till it may be reduced to an impalpable powder. In this preparation the greatest part of the Sulphureous particles do evaporate; in the mean time the saline are much encreased by others accrewing from the Vinegar, which are mixed with the earthy particles. This powder of Steel hardly froths or bubbles at all upon pouring an acid liquor upon it, and when it is taken inwardly hardly produces any Sulphureous nidour: and therefore it is not so profitable for opening obstructions of the Viscera or restoring the ferment of the Blood: yet in an hot constitution it uses to be given with greater success than the former preparations in the Hemorrhagies and Hypochondriack Melancholy. 4. The Rust of Iron follows, which seems to be the extract or quintessence of the metallick Body: because in that excrecence some particles of all kinds, namely Sulphureous, saline and earthy, being loosed from the compages of the whole, are combined with one another, and make as it were a new mixt or concrete that is more subtil and defecate. Because in this concrete there reside fewer particles of Sulphur, therefore it does not so powerfully ferment the Blood, or unlock obstructions of the Viscera, as Steel prepared with Sulphur: yet in the hotter intemperatures of the parts or Humours it notably performs the intentions that are requisite from a chalybeate Medicine. Thus far of the preparations of Steel wherein the elementary particles of every kind are comprehended, though in a different portion: others remain wherein there is almost but one sort of particles, namely saline, or earthy, the other being driven away for the greatest part, of which sort in a special manner are *Vitriolum Martis* or the Salt of Steel, and *crocus Martis*. 5. For making *Vitriolum Martis*, first of all the metal uses to be eaten by some very acid and corrosive liquor, and to be dissolved into elementary parts: in the dissolution the saline particles of the *Mensstruum* hit upon the saline ones of the Iron, and are intimately combined with them, the other particles, viz. the Sulphureous and saline being in the mean time set aside and excluded from their fellowship: then common water being poured on the solution, the combined salts of both kinds are imbibed by the liquor, and the liquor being filtrated and evaporated the salts run into crystals. Such kind of salification succeeds well either with spirit of vitriol, oyl of sulphur, *aqua stygia*, or other distilled flagmas of Minerals: yea sal Armoniack only dissolved *per deliquium*, dissolves Iron in the same manner and disposes it to crystallize. *Sul Martis* (or the salt of Steel) being thus prepared has a sweetish tast with a certain rough stypticity, and so far partakes of a vitriolick nature that it seems not to differ much from green coprose: but being taken inwardly it does in some measure ferment the Humours, and pretty powerfully constringe the nervous fibres. This Medicine is not so proper in cold and phlegmatick cachexies, because no particles of the sulphur are exerted: but in hot intemperatures of the bowels with the prevailing of a dust sulphur, also in the wandering scorbutical and unequal effervescences of the blood and nervous juyce, being taken by it self or mixt with other Medicines for a Stimulus, it is often used with suc-

cess: yet in more tender constitutions there is danger lest the tone and fibres of the stomach should be hurt by its acrimony and too great constriction. 6. Lastly comes *Crocus Martis adstringens* prepared by a long calcination by the fire: namely let the filing, *Scoria* or plates of Iron be so placed in a reverberatory furnace, that it may be continually beat upon by an hot flame: the filing being thus placed will at first grow red after a fort, and run together into hard lumps; but after three or four days, suddenly swelling into an higher heap, it will become very light, impalpable and of a curious purple colour. In this preparation the sulphureous and saline particles, whilst by the force of the fire they begin to be driven from the concrete, do catch hold of one another, and so being mutually combined grow into lumps: yet afterwards these particles, both saline and sulphureous, being utterly put to flight, and the fiery succeeding in their room, the whole mass swelling in bulk and being made spongy as it were, becomes exceeding light. The Medicine thus prepared is in some cases of excellent use and inferior to no chalybeate; namely in all extravasation and too great eruption of the serum and blood, as in external and internal hemorrhagies; in a *diarrhea* and *diabetes*; in a violent catarrh; also in the beginning of an *Ascites* or dropsie I know nothing better. But some may think, that if this Medicine be destitute of saline and sulphureous particles, there is nothing left but a *caput mortuum*? *Ans.* 1. Its efficacy depends upon the fiery particles (being included in the most fixed earth) that break out within the body. 2. The earthy particles being wholly destitute of the saline (whereby they were very faintly held) do very greedily desire to be reunited to the same or the like: wherefore this *Crocus Martis* being taken into our body does snatch and close with all the salts it meets with; and so while like a sponge it sucks up very many saline particles, it takes away many enormities that arise chiefly from the fluor of the salts: upon this account burnt Hartshorn, *Spodium*, *Antimonium Diaphoreticum*, &c. do good.

XXXVI. It is doubtful in what parts of it its astringent vertue, and in what its opening and loosening consist; and this we ought to know, lest whilst we would bind, we loosen and open. Divers men think diversly; I am of opinion that the opening vertue of Steel is not superficial, but lies hid within, and cannot be drawn forth but by many heatings of it and long preparations, which may loose the strait compages of the Iron: Hence I determine that the first infusions do bind, that the strong and often repeated do open: Thus chalybeate milk and wine bind, if the extinction be moderate, but when it is plentiful, the belly is loosened by them through a larger quantity of the substance of the Steel mixed with them: inasmuch as the opening vertue consists in its vitriolick part, which cannot so easily be drawn out. Therefore the oldest Iron that has been often heated is preferred, because it may be more easily prepared and dissolved. It also uses to be prepared by vinegar and wine, and by the sharpest liquors, to bring out the opening vertue that lies hid in it. But water and milk, and other soft liquors can draw nothing out of Iron, and therefore they bind, unless its vertue be drawn out of the fire in often heating of it. Thus mineral waters, that spring from Iron and vitriol, do open very powerfully, which have not the substance of the Iron it self, but only its more pure and spirituous part mixed with them by the subterraneous fire.

XXXVII. Note, that Chalybeate Medicines (amongst which *Augenius's* Electuary of Steel is famous) does operate more happily, if wine be diluted in Steel water and aliments boyled therein.

Tho. Willis
patholog.
cerebr. c. 14

Primitiv. l.
2. de feb.
c. 1.

XXXVIII. There want not some who make an *Electuary of Steel* with Agarick, Carthamus seed, *Senna*, Mechoacan, &c. which practice is by no means to be admitted of; for if the Physician intend to strengthen, to open obstructions, to unlock stuff parts and provoke sweat, by incising the thick humours, and widening the pipes by exercise, why will you procure a contrary motion by provoking to stool? Besides, those that take Steel are wearied with exercise to make them sweat, why therefore shall they on the same day be tormented with an evacuation by stool? Moreover violence is offered to nature, which is very much cast down by this inequality of motions. 'Tis better therefore by intervals to purge out the thicker part of the humours by stool, resting two days from the chalybeate for that purpose, whereupon some mild purger may be given. Nor did *Galen l. de ther. cap. 16. Actius tetrab. 3. ferm. 3. Paulus lib. 7. tit. de ferro*, *Rhases* and others use to mix Steel with purgers when they used it to waste great Spleens, and to root out stubborn obstructions.

Zacut. Pr.
h. p. 485.

XXXIX. Cordials seem fitting to be mixed with Steel, seeing it is an enemy to the parts, and causes griping, head-ach, dryness of the mouth and inflammation. It is reckoned among poisons by *Avicenn. 64. tr. 1. cap. 48*. But that is to be understood of that which is not corrected, or is not given seasonably and in a moderate dose. Wherefore I have always thought it more adviseable to mix with it things that may increase its virtue, that have a similitude with the part affected, and may correct its hurtful quality, in the number of which are Treacle, Mithridate, *Diarrhodon Abbatis*, *Aromaticum rosatum*, &c.

Idem
ibid.

XL. The Body should be well purged before the use of Steel, especially in the Spring time which is the fittest season to give it in, seeing the faculties are then strongest and the Organs best disposed; or else take it in the Autumn, if the cure cannot be deferred till spring; not in Summer, for though through the heat the Medicine may then be sooner distributed, yet the faculties languish, and by the requisite exercise a Fever may be kindled: In Winter the Humours are concrete, the pipes straitned, and there is no place for exercise because of the coldness of the ambient air.

Idem p. 484.

XLI. It is commonly enough known that the Salt of Nitre cools the Blood and powerfully provokes Urine: but the reason of both effects appears not so plainly, because Nitre is so far from containing in it self cooling particles, that on the contrary nothing is more igniparous or productive of fire, as we see in Gun-powder; and if it be distill'd, there seems to pass forth into the receiver rather a flame than a vapour or smoak: moreover the liquor that is distilled, burns and corrodes all the Bodies it touches, like actual fire. Nor is it less wonderful how this, whose nature is so very fiery, should so dilute the Blood and fuse it into aquosities for provoking Urine. That I may propose my conjectures about these matters, I say that Nitre does contribute to these effects in a twofold respect, viz. both as it is a Salt, something of kin with both a fixed and volatil, and as it is *πυρρὸν*, a fiery thing. As to the first I have observed that Nitre (as also fixed and volatil Salts) being put into Milk does either hinder or take away its coagulation: in like manner hot Blood being poured upon it (no less than upon them) is preserved from coagulation and discoloration. Wherefore inasmuch as the particles of the Nitre taken inwardly do preserve or restore an intire mixture to the Blood, they will therefore prevent or remove the fusions and coagulations of the same, from which heat and stoppage of Urine do very often arise. But besides, Nitre, as it is fiery, being taken inwardly cools the hot Blood and provokes Urine, inasmuch as it kindles the flame of the Blood more that was

before turbid and mixed with smoak, and makes it more clear and pure, and therefore more mild: and seeing thus the Blood, while it is made to burn clearer by the Nitre, is more loosened in its consistence, the ferrous particles extricate themselves more easily and depart more plentifully from the willis thicker.

XLII. The use of Oxymel and Hydromel was in far greater repute among the Ancients than now among us. The Arabians, who first brought in the use of Sugar, are the cause that divers kinds of them have been turned into Syrups, of which there is a great number: but that which is urged for establishing the use of these, viz. that they may be kept longer and are more grateful to the palate, wants to be proved: But it is without all doubt, that all the kinds of Hydromel, and especially of oxymel, but chiefly that which is called *Meliceratum* (when Water, Honey, and sometimes Vinegar are mixt together) are far more profitable, convenient, yea fitter for all curative intentions, than Syrups are: seeing Sugar is a certain sweet Salt induced with not a little heat, to which a certain obstructing & glutinating quality is joined, whence it may be esteemed not so fitting for preparation, alteration, mitigation of Humours and excretion of them, for which purpose syrups are composed. Add hereto, that in cholerick & naturally lean Bodies, like other sweet things, they easily turn to choler, whence there happens more harm than benefit to such. You will object the sweetness of Honey: we will admit that, but this is far more defecate and pure, and endued with a Nature that is more aereal, celestial and approaching toward a quintessence, than Sugar, which though it be superficially sweet, yet inwardly it abounds with an Acrimony and no little blackness, as those know well and find that have made any progress in the inward and vital Anatomy of things. Which was noted and diligently observed by *Galen*, and after by *Oribasius medic. collig. l. 5. c. 24*. who while he extols the faculties of oxymel that are acid and vitriolate, prefers it before Hydromel, which for its sweetness is not so agreeable for hot temperaments and more fervid natures, because it is easily turned into choler. Seeing, says he, the faculty of *Meliceratum* has all other things, that are good for acute Diseases, yet in one only it is contrary to them, that being over-heated it is turned into choler: the mixing of Vinegar with it hindring this change of it, makes it an excellent Medicine, and so much Vinegar is to be put in the *Meliceratum* as may be sufficient to correct its aptness to turn to choler. *Querc. pharm. dogm. c. 76.*

XLIII. *Galen (l. 6. de Med. Simplic. Chap. of Plantain)* says, that its leaves and roots being dried avail to open Obstructions of the Liver and Kidneys: for Plantain being dried abstergeth and discusseth, as the green represseth. Hence let the error of those be noted, that in the Winter use dried Herbs instead of green, which differ very much in nature and qualities. *Sanctor. met. vit. error. l. 13. c. 3.*

XLIV. Young Physicians are to be admonished, that in correcting glutinous Phlegm they be careful not to use much Sugar, or very sugared Medicines, seeing the Phlegm is not so much corrected and dissolved thereby, as made every day more glutinous. *Fr. Sylvius Pract. l. 1. c. 34.*

XLV. It is well known that Wormwood cleanses the Blood, brings forth Choler and provokes Urine, and evacuates almost all the Recrements of the Body insensibly: But that the too great use of it is hurtful, appears by this example: A certain man in the Spring and Autumn used daily to devour several whole leaves, without any nausea for many days: At length in the Spring eating too much he fell into a cholerick looseness without trouble, which stayed of it self: In the Autumn following betaking himself again to it as to a Panacea, and eating it as plentifully as before, he fell into a difficulty of Urine with great heat in making of it: and he made a muddy,

J. Udalr.
Rumler.
Obs. 47.

muddy, thick and stinking Urine, and that often. Being bid to refrain, he grew well in a few days.

XLVI. Common Wormwood is astringent; bitter; acrimonious, heating likewise and exterging, strengthening and drying, as Galen teaches 6. Simpl. 69. though it be of unlike Parts, viz. hot in the first degree and dry in the third: and its juice is far hotter than the Herb. Note therefore this discrepancy of its Parts which appears very manifestly, lest whilst Authors extoll the use of Wormwood with the highest Praises, we be indifferent at what time of the Disease, or in what Diseases we use it. For seeing its stypticity is stronger than its bitterness, as Avicenna has it (L. 2. tract. 2. c. 2.) we must take heed to whom we give it. Wormwood is the chiefest of those Medicines that help while the Disease is drawing on towards its state, to rectify and mature the matter it self, and to remedy its hurtfulness: but after signs of digestion it is not good, for it only moveth the Humours and does not evacuate them, it causeth straitness of Breath, and pensiveness and loathing, and reverts upon the Patients with its heat, and dries them, and makes them costive by its stypticity. Thus far Avicenna.

S. Pauli Quadrip. Botan. class. 2. tit. absinth.

XLVII. Some Preparers are Universal, others Particular. The former are not so called strictly, as if they were alike proper for all Humours; but such have that name as are Polychresta, good in several cases, and are of more common and frequent use. Such are Aperitives, Antiscorbuticks, Anticacethicks, Hepaticks and Spleneticks. For the more frequent causes that hinder the vertue of Purgers to operate according to desire, are obstruction of the Vessels, driness of the Humours and a Scorbutick taint: And so neither Tartar vitriolated, nor the Cream or Crystals of Tartar, nor the *mistura simplex* it self deserve or ought to be called Universal Digestives on any other account than this, that they have a notable unlocking faculty, and satisfy many indications. Particular Preparers are Alteratives, and such as open or incrassate slenderly: and of this sort are those Remedies that are appropriated to certain Parts.

Gr. W. Wedel. de C. m. fic. p. 128.

XLVIII. Cholera naturally is of a Saffron colour in two respects; for when it is thicker, it is a little reddish like Saffron, but being more dilute it is yellow. This colour is preternaturally changed into various kinds of green, and sometimes into a sky colour, or a black. Now because I am taught by long and manifold Experience, that all this change of colour in cholera depends on the Pancreatick juice's being mixed with it, in which is a multifarious acid acrimony, any one may see that the alteration of the colour signifies not a primary fault in the cholera, but a secondary and such as is owing to the said juice, and indicates its correction to be by correcting the same juice. When therefore the cholera acquiring a colour different from the natural becomes more acrimonious, and that acrimony is not its own proper and lixivious saline, but adventitious and foreign, namely acid, which yet varies gradually accordingly as its colour changes; the species of the Corrector is withal indicated, namely such as is fit to correct, break and temper an acid. For 'tis obvious that eruginous and deeply green cholera, does by its smell and griping give manifest signs of its offending acidity: as black cholera does yet more manifestly evince it, which will make a notable effervescence in a Copper Vessel, nay upon the ground it self, such as is altogether like to that which *aque fortes* use to raise in the same. As to the taste of the cholera, 'tis known that cholera is naturally bitter, but that preternaturally it is sometimes of a vitriolate taste, but joined with a notable bitterness which there is but little of in Vitriol. This vitriolate taste of the cholera signifies that much acid is mixed with it, and so indicates the contemperation and correction of the same: And Cholera that is less bitter, indicates a defect of bitterness, and also requires an increase. As to the smell, the natural can

hardly be expressed, unless we call it *bitterish*; hence we say that eruginous cholera smells of an acid, when indeed its smell and *halitus* being mixed with the inspired Air in the Nose penetrates even to the Throat, and there manifests its acrimonious acidity to the taste, though we call it a scent. The stid or rank smell of Belchings is ascribed to corrupted or corrupting cholera, inclining towards the nature of eruginous. But when it smells of an acid, as it is a sign that a more acid Pancreatick and Melancholick Humour is mixed with it, so it indicates the correction of the same, &c.

XLIX. The saltiness of the serum, if I guess well, being such as we observe in Sea-salt, *sal gemma* and the like, seems to derive its origine chiefly from a pretty pure lixivial Salt and acid Spirit mixed together, yet the acid Spirit exceeding a little. Now things contempering this saltiness are Gum Tragacanth, Arabick, Mastich, Frankincense, Styra calamita, Henbane seed, the root of Houndstongue, &c. as also the Pills called *de Styra*, de *Cynoglossa* and *arnoglossa* or Plantagine, by which, salt and ferous Humours are tempered and corrected, as Experience witnesseth.

L. In a melancholick *cachymie* both the defective serum is to be restored by moisteners, and its kindly vigour by absorbing the acid and fowr Humours with heating Aromatics. But acids as they are good for the Choleric and Phlegmatick, so they are hurtful for Melancholicks; for they more obstruct the Sulphur.

LI. But atrabilary Humours, or the more intense sulphureous parts of the Blood exalted with acid salts and exceeding in acrimony, need more dilution and temperation, whence nitrous and absterging watry Remedies are to be preferred before others: and whereas the viscera do greatly cherish this evil, Remedies that depurate the Blood, open and absorb, do chiefly benefit.

LII. Many attend not to the correction of the offending acid, because the knowledge and doctrine of acrimonious things has hitherto been confused among Physicians, who have made no distinction of acrimony: but now a twofold Acrimony (and that contrary the one to the other) being manifested by me to such as are willing to be wise, and confirmed for some years by the Experience of many, many attend more both to the vertue and daily mischiefs of each sort of acrimony, and also to the best correction of the same. ¶ Whatsoever in nature is observed to be acrimonious and biting besides fire, is all of it either an acid Spirit, or a lixivious Salt, or, to speak with Pliny, a *lixivium*, (or Lye) in regard that from the ashes of things burnt it either turns into a Lye of its own accord by means of the moist and watry Air, or is drawn therefrom by pouring water upon them, & then by evaporating the water it may be reduced to the consistence of Salt: the more acrimonious whereof we use to eat little Ulcers in the Skin for Issues. Where note that both the lixivial Salt and acid Spirit obtain their notable acrimony from the fire, seeing both are prepared from a saline matter by the force of a sharp fire. Now seeing no such or so great fire can be kindled in our Body, as is needful for the making of an acid Spirit, it is not to be supposed that any acid Spirit is properly prepared in the Body, but only principally separated and freed from the tempering impediments, viz. Oil and volatil Spirit. A pretty pure acid Spirit has often been observed in the Body, even without the use or abuse of any thing that has been manifestly acid: Thus diverse-coloured stools are observed in Infants, yet commonly of a various green, and smelling acid, whence doubtless Epileptick Fits have their origine from an acid Spirit fermenting in the small Guts with the cholera. Thus torturing Pains in any part of the Body that sometimes arise like lightning on a sudden, or otherwise rack cruelly, yield a certain Argument

Sylv. de le Boe m. m. l. i. c. 7.

Idem, Append. tract. x. in fine.

Idem.

Idem.

Idem c. 5. §. 57.

that

that there is an acid Spirit separately in the Body that is very moveable and gnaws the sensible Parts. So rottenness of the Bones shews that there is a too pure acid Spirit in the Body, which is clear from the intolerable Pains that often go before and which can only be deduced from acidity: Namely the acrimony arising from a lixivial Salt abides more fixt in the same place, and seems to burn the Part affected, while an acid Spirit is judged to hit, or tear, or perforate by repeated gnawings the Part that is seized upon by it. This conjecture of mine has been confirmed by spittle that has sometimes been so acid, as to set the Teeth on edge like other acids taken into the Mouth. The matter of acid Humours is supplied to the Glands from the arterial Blood, wherein that there are acid Spirits is evinced both by its coagulation into clods when it is let out of the Vessels, and also by the corrosion and consumption of the Bones that is made by the arterial Blood in an Aneurism. The acrimony of an acid Spirit is temper'd chiefly by a volatil Spirit that sweetens the same being easily united to it: Thus Spirit of Wine being cohobated with Spirit of Salt does so lenise the same, that it is then called sweet by Artists. The same is temper'd by all sweet things, but these do more difficultly unite with it, if it were not for the lixivial Salt that is mixt with the fat. For as an acid and volatil Spirit are easily joined throughly with one another, and an Oil is easily mixed with a lixivial Salt: so on the contrary a volatil Spirit and lixivial Salt do more difficultly combine together, and the most difficultly of all an acid Spirit and Oil. ¶ Though all acrimony seem to produce a sense of heat in sensible Parts; yet from the cure there appears to be a different acrimony, one indeed joined with heat, and another destitute of it. And seeing we have not only discover'd two sorts of acrimony that are found in our Body, but besides from their conflux, because of other things that are joined with them, a double effervescence is observed to be produced, both an *hot* and also a *cold*, which are not only manifest to sense, and therefore distinct from one another, but yielding to different Remedies, and so also differing from one another; It may deservedly be queried, what sort of heat that is which uses to accompany now and then (for instance) the flux of the Terms, whether that which has its rise only from an *hot* effervescence, or also from a *cold*? or whether from each acrimony offending without such an effervescence? By neglecting this question and the clearing and determination hereof, we should undertake an Empirical, rash and often a pernicious cure: For seeing the heat may be produced from divers causes, it is also to be cured diversly according to the diversity of the cause. And if any object, that I have taught that both sorts of acrimony may be allay'd and temper'd by the same Medicines, both spirituous, and oily, and watry, and that therefore it matters little what acrimony offend, seeing the same Medicines are profitable in both cases: I answer, that both sorts of acrimony are indeed temper'd by the same Medicines, but not alike quickly and powerfully, seeing oily Medicines do both more easily, and quickly and powerfully temper a lixivial Salt, as on the contrary spirituous volatils an acid Spirit; so that though all things that temper either sort of acrimony are always administered with Profit, and especially when there want signs that may demonstrate sufficiently whether of them do primarily and chiefly offend; yet as often as it can be known which offends, it is better to use chiefly those Remedies that are especially conducive to the tempering of it: which as it is sometimes known from concurring signs and symptoms, so it is frequently concluded from the different operation of the Medicine that is given, that is a *juvantibus vel nocentibus* (from helpers or hurters) according to the golden axiom of Practitioners. The

heat therefore that is produced (for instance) from the menstuous Blood in the ways through which it is poured forth, has sometimes, yea indeed often, its rise from an acid Humour that is in the Womb, and which comes forth with the Blood, whether it make none, or an *hot* effervescence therewith: If the acid Humour that is found preternaturally in the substance of the Womb, cause no effervescence with the menstuous Blood, there will rather be felt a troublesome gnawing than a true heat in the Parts affected: But if the same acid juice do cause an *hot* effervescence with the menstuous Blood, then there will be raised an heat, and often a redness also even in the extreme Parts: and both will be observed, when the acid does either notably gnaw only, or also burns withal; but as often as the offending matter is more gentle, or more broken; then we cannot so distinctly conclude in what regard the acrimony offends. I am therefore of opinion, that in the heat that accompanies the flux of the Terms an acid always offends, whereto is sometimes joined a more or less choleric Blood, whence the said heat uses to be diversly changed and felt. ¶ An acid acrimony is temper'd by several oleous things, by Oil it self, any sort of Milk, Broth of flesh, especially such as is fat, Emulsions prepared of divers sorts of Seeds, especially of sweet Almonds: Moreover by sweet things, Sugar, Honey, Raisins, and sometimes by spirituous things, or others that concentrate an acid, such as Corals, Perles. A lixivial, and aromack acrimony, such as is in Pepper, Cloves, Rocket and the like, is temper'd by both the aforesaid oily and sweet things; yet 'tis safer to abstain wholly or in a great measure from them. A Salt acrimony, such as is in Sea and Pit salt, and most salted things, is wonderfully corrected by Lime made of burnt Flints or Shells, which no prudent Physician will be any longer afraid of, but may be used with very good success for very many Diseases under the form of a Lye.

LIII. We must take great heed that in curing one offending Humour we hurt not another. For though it appear from Experience that the Medicines which are taken, act chiefly on the offending Humours, when they are most proper for correcting them; yet it is also manifest that the Medicines that are fit to alter several different Humours, do in some measure also operate upon the Humours that do not offend, when they are either taken in too great a quantity at once, or for too long a continuance. Though therefore there arise not always presently any notable hurt from the use of such Medicines that are not in every respect accommodated to the offending Humours; yet the same shews it self by degrees to such Physicians as are diligent observers of all the changes that happen to their Patients: which Physicians when they foresee any thing that will hurt, do prudently provide for the same, and change those Medicines from which they see not plainly that their proposed scope is to be hoped.

LIV. Both effervescence being vitiated in the small Guts and Heart, and being joined with a troublesome heat, is bridled and reduced to a moderate and temperate degree, partly by acid and sour Medicines, especially being joined with *Opiats*, to which doubtless the fixed Sulphurs of Minerals and Metals are to be preferred; which if any one cannot have in an excellent perfect degree, let him at least endeavour to make them sweet, such as will neither provoke Vomit nor Stool. For those Sulphurs, so long as they are volatil and combustible, use to provoke Vomit and Stool, which in this case is hurtful, namely when we have a mind to bridle a too great effervescence, and to reduce it to a laudable mediocrity: for the Humours are disturbed by all Purgers, and the effervescence promoted and not restrained. Now for want of such Sulphurs as are sufficiently fixt, we may successfully use *Opiats* joined with

Idem Dispens.
Medic. vij.
§ 43. & seqq.

Idem Prax.
l. 3. c. 3.
§ 416.
& seqq.

Idem Prax.
xenos l. i. c. 6.
§ 11, 12, 13,
& 14.
See more
lib. i. tit. de
Aphthis.

Idem Append.
pend. Tract.
6. § 257,
258, 259.

with acid and sour Medicines: whence on this account the extract of *Opium* with distilled Vinegar, is better than that made with Spirit of Wine, seeing by such Preparation it is fitted for tempering the too great effervescence of the Blood. The same effervescence is much bridled by an emulsion of Barley, of white Poppy Seeds, yea of sweet Almonds.

Idem Append. Tract. I. Sect. 7, 8.

LV. The Pancreatick juice abounding too much in the Body indicates its diminution, and that by Stool. Where note, that seeing it is naturally subacid, it is good to prepare it a little first for the more easie carrying of it forth, by further tempering its acidity and in a fort concentrating of it, which is best done by volatil Salts and afterwards using Hydragogues, seeing the liquor is of it self thin enough, clear and subacid, and therefore coming nearest the consistence of Serum, though now and then it become proternaturally glutinous, and so incline more to the nature of Phlegm.

Idem Meth. Med. I. c. 16.

LVI. Seeing all the Humours ought to be fluid, they offend variously, as often as they lose that fluidity either in whole or in part, or have it more than they use or ought to have it. The Blood loses its fluidity wholly, when it cardles and coagulates into clots: and this is done either by the external cold of the Air, Water, &c. or by eating or drinking acid and sour things especially, or glutinous or earthy, also by sadness of mind, or affrightment, or by sluggishness and rest of the Body; or lastly by too much sleep. Now according to the diversity of the cause is the diminished fluidity of the Blood to be cured diversly: for when its fluidity is diminished from the external cold of the Air or Water, then not only it is to be restored, but also the diminishing cause is to be expelled forth by the same way it came in: Thus besides volatil Salts, and divers things derived from Animals, as Crabs eyes, Mummy, Sperma celi, &c. the more grateful and acrimonious aromack Plants are likewise good, especially such as may at the same time drive forth Sweat, and therewith also the mischief induced by the Air. When it is coagulated more than usual by acid things taken inwardly, let such things be used as both infringe, concentrate and enervate an acid, and also dissolve the coagulation it self, and so make the Blood fluid again. Things infringing the force of an acid are Chalk, Corals, Crabs eyes, Perles, &c. Aromatics make the coagulated Blood fluid: Volatil Salts do both. When the consistence of the Blood is increased and its fluidity lessen'd by austere or sour things, it is harder to restore; but no Remedies that are commended by any for this, can be compared with volatil Salts, as both powerfully correcting austerity, and happily taking away and curing the hurtful effect thereof: add, that most things that are received into use are derived from Animals, and contain much Salt: Hither are to be referred the more gentle Aromatics. When the Blood is not fluid enough through the abuse of glutinous things, things profiting are 1. Spirituous acids; 2. The more acrimonious Aromatics; 3. Pickles and Medicines prepared of a mixture of both; 4. Volatil Salts. When the consistence of the Blood is increased from earthy things used amiss in the Green sickness, it very difficultly and that but slowly yields even to the best Remedies: for which purpose I have hitherto found volatil Salts the best. When the Blood is made less fluid through sadness of mind or some great fright, then both the mind is to be comforted and confirmed, and the fault that is introduced upon the Blood, amended; which because it is like to that which is caused by sour things, is to be corrected with the same. If from too much rest of the Body the Blood be made more sluggish in its motion, that mischief will be repaired by the motion of the Body: When from too much sleep, it will be corrected by waking longer; if so be these changes, viz. of the motion of the Body and waking, be made by degrees, not all of a sudden.

Idem Meth. Med. I. 2.

Purgation.

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Antimonium Diaphoreticum being added to Purgers increases their vertue. CIX.

I. Some question whether Purgings ever do good before Concoction, and without turgescence? I have found by Experience that it does so sometimes, and there is reason why it may. For if it be certain that symptomatical evacuations are sometimes profitable, Purgings before concoction may also happen to be so. For if there be a time when Nature her self, without any external provoker, does profitably expel things unconcocted; there may be a time also when she may be benefited with helping her by a provocative to do that which otherwhiles she does of her own accord: And if she can profitably evacuate without help, she may evacuate more profitably when assisted by the help of Art; for nothing can hinder Purgings before Concoction, that does not also, and far more oppose symptomatical evacuation. But when besides want of Concoction or turgescence, there are present all other conditions that may disswade from Purgings, then abstaining wholly from it, if I may not let Blood, I will however provide for the faculty, and use only Clysters and Suppositories. But if, though there be neither Concoction nor turgescence, yet other conditions do not wholly deter me, I will venture to Purge for urgency, and that by so much the more confidently, by how much the conditions that invite shall be the more numerous; for this is indicated, if the evacuation may profit and not hurt, which it is the part of an Artist to find out. Now by what conditions one may know whether this or that Person are to be Purged at this time, I shall endeavour from Reason and Experience to shew. A special condition that permits Purgation is, if the Hypochondres be quite free of a Phlegmon; for if any one shall endeavour to remedy an inflamed Part by Purgings, he shall take nothing of that away which is inflamed, but shall increase the Phlegmon, cause a colliquation, and so procure Death. Moreover a moderate Fever permits it; but if a Purge be given in a very high burning Fever, the hot flesh attracts it, and so nothing is evacuated, but the Fever and Cacoehymie is increased: But a principal thing that hinders, is the heat of the Head and spiritual Parts; because these Parts when they are hot, are apt to draw all things to themselves, and to absorb what the Medicine stirs: Driness of the Belly or costiveness also hinder; because this indicates that the Humours incline some other way, and 'tis to be feared that when they are moved and not evacuated, but snatcht some other way, they prove a cause of greater mischief. 'Tis also of very great moment to consider the nature of a man; for some are easie to Purge, and that without any Symptoms or Mischief, Purge them when you will: Some are so hard, that though they be Purged in the fittest Season, they are seized upon by horrible Symptoms, and are manifestly worse afterwards. When these conditions that hinder are two or more of them present, we must rather put it to the hazard than Purge: But if the Patient be one of those that are easie to Purge, and be sick of a Putrid Fever, with some suspicion of Malignity, if he have been let Blood sufficiently, and the Humours be not turgent indeed and wandering up and down,

nor yet altogether quiet, but fufed as it were and tending towards the Belly, which is fhewn by a rumbling in the Hypochondres or loofe Stools, two or three in a day (for this is no fmall invitation to Purge) if the Hypochondres themfelves be loofe and not hot to any confiderable degree; nor the fiefh burn through the whole habit of the Body; if there be felt no great heat in the Head or Breaft when one lays his hand thereon, but the Fever that is, is difperfed equally all over the Body, or incline to the lower Parts; in thefe cafes, though there be no concoction as yet, I will give a Purging Medicine, becaufe that which is prefent does not very much hinder; and that which is feared, is urgent; and the indication of urgency is the firft of all. But if there feem to be any Inflammation or Phlegmon lying hid in the Belly, though I fear a Cacoehymie; I will not give a Purge; I will rather venture, even though the faculty be doubtful, to let more Blood than I had thought for: I will do the like, if the Breaft or Head, or all the fiefh burn vehemently, unlefs there be great defpair of the faculty; for if there be, I will moiften the Head with Vinegar of Rofes, the Breaft or even all the Body over with Water and Oyl, and will give cold things to drink. So if he I am a fpeaking of be very coftive, I will refrain Purging, though I fear the nature of the Humours, till I have firft a little foftened the Belly with mollifying Clyfters (for acrimonious ones are not good for this purpofe, becaufe they have the hurt of Purgers in them, and rather dry the Belly) and the ufe of light Meats, as fiew'd Prunes, &c. But it is manifeft that if two or more of the aforefaid things hinder, we muft take a courfe with them before we Purge, and that together, if we can, as if both the Head burn and the Belly be dry, the Belly muft be foftened and the Head cooled by irrigation at the fame time. But if the Difafe do not at all yield to thefe Remedies, but the concurrence of Symptoms continue, and there be no urgent caufe, we muft not Purge, for if we do, the Patient will on the fame day be taken with light-headednefs and convulfion, and, it may be, die to the great infamy of the Phyfician: We muft therefore do any thing rather. There are many things in this Art, wherein for urgencies fake, it is an art to depart from Art, &c.

II. Many keep a great pother about expounding Aphor. 22. 1. and 29. 2. Things concocted are to be purged forth, and not crude, &c. But in my opinion the matter is not fo abftrufe: for I think that Hippocrates underftood nothing elfe by things concocted, but fuch things as may be feparated from the mafs of Blood: And in the other aphorifm, by the words [If any thing be to be moved, move it in the beginning of the Difafe] I think he means that we fhould purge prefently after the beginning of the Difafe, before the vitious Humours, by means of the perpetual motion of the Heart, be confufed and mixt with the whole mafs of Blood. For if we please to confider this matter further, we fee that Humours may then be feparated, 1. when they are overcome by Nature: 2. when fome vitious matter sticking fomewhere in the Body, is not as yet confounded with the Blood, as I have faid: 3. when by due helps we affift Nature that is endeavouring to attenuate and conquer the Humours.

III. A concoction of the Humours is not always to be tarried for, nor is their preparation always to be premifed: before we will purge the Body: for when the matter is moveable, prepared for excretion, ebullient or turgent, what need is there of digeftives? and one Purge does generally lefs offend the Stomach than fo often repeated digeftive potions, that difsolve and taint the Stomach, fo that crudities being thereupon increafed, there is a greater afflux to the joints (he is fpeaking of the Gout.) Add hereto that while we are bufied with

digeftives, the pains increafes, the ftrength decreafes, time is loft, and there is not always place for purgation afterward.

IV. I affirm that Purges may be fometimes given without concoction becaufe of urgency; but yet not unlefs there be fome fignification that the Humour is inclining towards the Belly, or at leaft that it is not very averfe from that way; feeing Hippocrates requires that in thofe purgations that are to be made in the beginning, and while the Humour is not as yet concocted, there fhould at leaft be prefent a rumbling in the Hypochondres: I am of opinion that any vergency may ferve inftead of fuch rumbling, as if the Belly be loofe and moift. But if befides that there is no fign of concoction, the lower evacuations be very much fuppreffed, and the Humours fnatched fome other way, the greater the Difafe feems, the lefs dare I give a Purge, becaufe it feems more certainly to happen that the man will die with madnefs and convulfion, of internal Inflammation and the extreme parts cold.

V. Hippocrates fays that crude things are not to be purged, but concocted, nor in the beginning unlefs they be turgent. Galen in comm. explains the word *ὑγρῶν*, and fays it is tranflated from Animals that are excited to venery, unto the Humours: 'tis likely that the Humours are not only turgent, or moved up and down the Body, but that there is moreover an impulfion of irritated Nature. Nor are the Humours to be thought then only to be turgent, when they are moved this way and that way reciprocally, in a wandring manner, with fear of ruftling into fome principal part; but alfo when they incline to a certain more ignoble part that is deftin'd for evacuation, to wit, the Stomach and Guts, & worshipping upon their Knees as it were, implore the Phyficians help, intimating by a dumb voice, either by fwelling and elevation of the Body, or by the rumbling thereof, that fhe is burthened and preffed with a troublefome load. If fuch things happen in continual and burning Fevers, efpecially in the beginning, while there appear as yet no figns of concoction, we may purge by the example of Hippocrates, 7. Epid. 1. 178.

¶ P. Martianus comm. in aph. 22. 1. does not explain the word *ὑγρῶν* by a wandring and uncertain motion of the Humours, for this reafon, becaufe upon giving a Purge at that time they are ftirred up more, with danger, that they will rather fall upon fome part than be excluded out of the Body. Which opinion is the more likely, becaufe it is obferved by the beft Praditioners, that fuch unruly motion of the Humours is rather allayed by Bleeding than purging. See the title *de Sang. mif.* above, and *Pharos medicorum* l. 4. § 29. But hear Martian upon the word *turgent*: Whether you refer it to the Body, or the Humours, the difpofition of the Humours is intimated, whereby, feeing they are fixed in no part of the Body, they yield a fignification concerning themfelves fometimes in one part and fometimes in another: But the name of *orgafm* is not, I think, derived, as Galen fuppoles, from the Humour's being often moved to and again through the Body, like animals that are incited to copulation; becaufe, though it be granted that *ὑγρῶν* is borrowed from animals excited to copulation; yet it is not upon the account as they are moved this way and that way, but becaufe their *puenda* are turgent; which Aristotle hath noted l. 6. de hiflor. animal. c. 18. which word Theophrastus ufed l. 1. de cauf. plantarum, to fhew the time when Plants begin to bud, faying that *ipfis gemmae turgent*, their Buds grow turgent, and yet the Plants are not moved up and down: in which fenfe Hippocrates alfo ufed it lib. de fract. com. 3. t. 18. and lib. de nat. pueri n. 20. Yea it hardly feems fafe to irritate by a Medicine the Humours when they are in a difturbance in the Body, and are moved up and down, to this and the other part: for Hippocrates 4. de morbis blaming thofe

Semier. l. de
Arthrit. Sec
Zachar. p.
hifl. l. 4.
c. 18.

Vallef. 3.
Epid. p. m.
875.

See Vallef.
in comm.
Rohine. lib.
de febr. c.
87.

Vallef. m. m.
l. 4. c. 2.

Waleus
Meth. Med.
p. 35.

Physicians

Physicians for the death of their Patients that gave Purges upon odd days, brought this for a reason, that on that day the Humour is disturbed in the Body: for, said he, if any do by a Purger yet more disturb the Humour that is already unquiet, no wonder that a man dies thereby: which danger though at length it be removed, yet purging in that case is rendred very doubtful; for as often as the Humours are disturbed in the said manner, seeing it cannot appear to the Physician to what part they will bend their force when the Purge begins to work, he can neither make choice of the way by which (according to the precept, *whither Nature bends*) evacuation ought to be made, nor prescribe a convenient dose of it, because 'tis requisite the Purge be stronger when the Humours are revell'd to a contrary part, than while their own inclination is yielded to. Wherefore I think the name of *turgency* rather agrees to them, because when the Humours are not fixed in a part, they signifie themselves to be somewhere, and the Patients feel a certain sense of *turgency* in that part, as if it were truly swelled. And this is often observed in practice; for when Patients feel that sense, they do of their own accord desire a Purge of the Physician. From this opinion therefore that Patients have of *turgency*, is this word translated to all those in whom the Humours are not fixed, so that they may be easily drawn forth by the Medicine, and herein we agree with *Galen's* interpretation: for when there is this facility of purgation, though there be present tokens of crudity, yet purgation is not hinder'd, but, if it seem otherwise necessary, it may be attempted.

The same facility of purgation *Hippocrates* thought necessary in Women with Child, lest the difficulty thereof should become destructive either to the child or mother or both. And therefore 4. *aph. 1.* Women with Child are to be Physick'd from the fifth to the seventh month, if there be *turgency*: Now if this *turgency* threaten'd the aforesaid danger, we should purge not only in those months, but in others also, because when a great danger is imminent, 'tis better to try an uncertain Remedy than none. Lastly, 'tis necessary there should be a facility of purgation, when the greatness of the Disease requires it, and the Faculties of the Patient are not altogether firm: Therefore *Hippocrates 1. de morb. mul. v. 232.* in the cure of a certain Disease having its rise from the suppression of the *Lochia* in a Child-bed Woman, durst not prescribe purging without *turgency*: for there he says. *If she have not her purgation, her Belly swells, as also her Spleen and Thighs, and she has a Fever: her pulse is weak, and sometimes acute, and sometimes it is high, and sometimes fails: thus it is in the beginning of the Disease; and in process of time see whether the parts of the face grow red: when it is thus, give light Meat, and if there be turgency, give her a Purge, &c.* As often therefore as the difficulty of purgation may bring some great inconvenience, *turgency* is required to make the purgation the more easie, but otherwise not.

VI. But we must consider that Nature may be *turgent*, when she is provoked not only by hot, thin and malignant Humours, but also when by many and cold: as *Hippocrates* teaches *1. de morb. mul.* who rehearses that a Woman may *turgere* through plenty of phlegmatick Humours: whereby it comes to pass that Nature often begins divers evacuations, and ceases by and by from her undertaking, and being weak and unable, desires and points to help; whereby, notwithstanding, inexorable Physicians are not moved, but only condemn them as symptomatick, and foretel the future danger, but do not at all prevent it; whereas *Hippocrates* hath often advis'd, that we must draw that way whither Nature bends; which opinion, besides shewing of the place that is fit for evacuation, insinuates also what Nature, who is the Mistress of Physicians, would have to be done.

VII. Whether *turgent* Humours be always to be purged off, *Cardan* doubts (*contr. 1. 1. tr. 6. cont. 14.*) because many things hinder such purging, viz. continual crudity, the use of thick and clammy Meats, obstruction, tension of the viscera, heat and inflation of the Hypochondres, Inflammation of the viscera: in which cases it is unlawful to purge without previous preparation, according to *Galen 1. aph. 24.* yet this opinion is repugnant to *Hippocrates* and *Galen*, who command to purge a *turgent* Humour presently without concoction; because the putting off purging, portends danger to life, and then all hope of safety is placed in hastening of purging. Indeed when there are many crude Humours in the first ways, and the other proposed impediments are present, we must purge with great premeditation: yet if the Disease be very urgent, it is better to use that Remedy, than to cast the Patient into danger of his life; for the harm that may be feared from Purgers, is to be preferred before death, as *Galen* commands *12. meth. 1.*

VIII. *Hippocrates aph. 22. 1.* says, that crude Humours are by no means to be purged, nor must we purge in *principiis*, in the beginnings: which is so to be expounded, not as if he excluded the beginning of Diseases as the unfittest time for purging, as the common opinion is; because this is so far from being *Hippocrates's* opinion, that he taught the clean contrary both by doctrine and examples. That aphorism is well known, *In the beginning of Diseases if any thing be to be moved, move it then: for when they are come to the height, 'tis better to be quiet: and he assigns a reason, for about the beginning and end all Symptoms are weaker, but in the vigor more strong.* And speaking more peculiarly of purging (*lib. de affect. vers. 29.*) Concerning the sick we must consider presently in the beginning, what thing they have need of, and what such things they are, as whether they should be purged, or you will do some other thing you have a mind to. But if omitting the beginning, when the Disease comes towards an end you give a Purge, the Body being now weakened, (perhaps being afraid to give any before) 'tis to be feared you will rather fail than have success. From whence we may conclude, that Purging is not only not forbid in the beginning, but of the two times wherein 'tis only permitted, I mean in the beginning and declination, the former is far to be prefer'd. And *Hippocrates* himself was so observant of this document, to purge in the beginning, that you will hardly find that he purged in acute Diseases when the beginning was over. Thus 4. *acut.* he bids us purge on the 4th day in a burning Fever; and after he says that it is to be done before the fifth. In the same place he appoints purging on the fourth day in the cure of a Pleurisie. In 3. *de morb.* he says that in a Peripneumony we must purge on the first, fourth and fifth days: In 1. *de affect. v. 267.* in a bilious Fever he chuses the 3d. or fourth day for purging; at which time he had order'd it a little before in the cure of a continual Fever. And 3. *de morbis*, in a Pleurisie he orders the Patient to be purged before he begin to spit thick Phlegm. Now by the word *beginning* we understand not the first invasion of the Disease, but all that time that is distinguished from the vigor, and from the declination: for this was the division of the times of Diseases that *Hippocrates* used, as we may gather from sundry places; but he signifies it to us most plainly in that *aph. In the beginning of Diseases if any thing be to be moved, move it then; but when they are at the height, 'tis better to be quiet: for about the beginning and end all Symptoms are weaker, but in the vigor more strong.* Wherefore in such acute Diseases as are not very speedily moved, the beginning is sometimes extended to the seventh day, so that a purge may be given even on the sixth. And this I would note, lest any, because *Hippocrates* has so celebrated purgation in the beginning of a Disease, should think that a Purge is to be given presently at the beginning, which I see many do, who

who at the first visit forthwith prescribe a Purge to their Patient, often before they can have any knowledge concerning the Nature of the Disease: from which importune way of cure many mischiefs use to proceed, that afterwards manifest the error of the Physician, while the Disease shews its self to be of the Nature of those that admit not of purging before Bleeding, a catalogue whereof Hippocrates makes, 4. *Acut. v. 28.* If such were under the Law of the Egyptians, they would often be call'd in question for their over hasty purging. Which danger that Hippocrates himself might avoid, he durst never (except in sudden and the most grievous Diseases) give a Purge till three days at least of the Disease were over, as appears from the above-cited places. Yea 4. *Acut. comm. 4.* concerning the cure of a burning Fever he speaks thus: *If it seem convenient to purge, do it not within three days, but on the fourth.* Seeing therefore Purging was so familiar with Hippocrates about the beginnings of Diseases, we cannot say, that in this aphor. he would exclude the beginning of Diseases principally from purging, when he said, *Nor in the beginning*; but that he meant, that even this time, that otherwise is the fittest of all for purging, is inconvenient whensoever there appear signs of crudity.

Martian.
comm. in
dist. aphor.

IX. Then may we give a *minorative purge* in the beginning of a Disease, when the pulses consist of great and small ones, or when there is an inequality of them: than which there is no sign more certain that the faculties are loaded.

Mercat. de
Fr.

X. At this day we observe purging to be much abused, and that there are infinite errors committed in it, while some think that the cure of no diseases is to be undertaken or performed without the use of Purgers, and that the health of the Sick is placed in often repeating these, without premising any appropriate Digesters, Resolvers or Openers: And so it happens by the undue administration and repetition hereof, no regard being had to the Faculties, that Diseases are rendred long, the Spirits exhausted, the Appetite dejected and crudities increased, from whence proceed a thousand mischiefs, as Vallesius l. 7. Ep. rightly admonishes us. Galen (l. 1. de hum. f. 1. con. 12.) taxes these inconsiderate attempts in the Physicians of his time also, that they were only solicitous about evacuating the Humour, without any consideration had of the strengthening of the Parts: for thus he says, *Whence we may see a common Error of Physicians which is generally committed in most Diseases: for they evacuate indeed what is superfluous, but never propose to themselves to take any care that the like to that which is evacuated may not be bred.* Whence also Poterius (Cent. 1. cur. 2.) grievously inveighs against such Physicians, calling them Tom-turd-men and not Physicians, far worse than Empiricks, and not differing from Mountebanks, Fortune-tellers or Juglers.

Frider. Hof-
man. m. m.
lib. 1. c. 7.

XI. Purgers are commonly distinguished into those that Purge the *first* region of the Body, which they say is on this side the Liver, and reaches from the Stomach to the middle of the Liver, and comprehends all the parts and ways that lie betwixt these two; and those that purge the *second*, which reaches from the middle of the Liver to the habit of the Body, and comprehends the upper or gibbous side of the Liver and all the greater Veins; and those that purge the *third*, which comprehends the habit of the Body, that is, all the Muscles, with the lesser Veins, membranes and other things. But Helmont's opinion is reasonable (in his book called *Demens Idea* § 20.) to wit, The first region is the Stomach and Guts with all the vessels contained therein; the second where the circulation of the Blood is made, that is, in all the Veins and Arteries; the third, where the Blood is extravasated.

Joh. Walaeus
m. m.

XII. It is false, that all extravasated Humours cannot be evacuated: 'Tis true indeed of the thick,

but not of the thin, which are signified if they yield to the impression of the finger: wherefore there-fore the Blood circulates, there I can also evacuate: yea purging is convenient also in the cavities which seems to be a fourth region, as in the *Abdomen*, Breast and Brain (and this experience teacheth) though there be no circulation of the Blood there- in. ¶ Galen (13. meth. 9. l. art. med. 95. and in other places) grants that Humours that are without the Veins in the habit of the Body, may return into the Veins again. The matter is clear by examples: Hippocrates 5. *aph. 65.* disallows of tumours that vanish all of a sudden. Small Pox and Measles from the coldness of the ambient air, from densation of the Skin and repression of the Humour retire to the inward parts. When an Humour is fixed most firmly in the outer parts, from whence a *Talpa*, *Natta* and other venereal tumours use to arise, it is waisted by the force of a strong Purge, as of *Stibium* or *Pulvis Vigonis*, or by the application of a Mercurial ointment.

Walaeus m.
p. 39.

XIII. Hippocrates 26. *vers. l. 4. At.* says that by giving a Purge in the beginning, Inflammations are irritated and not helped. Which saying hath produced many difficulties in art concerning the cure (universally taken) of Inflammations, and no small abuses in Medicining; seeing 'tis certain that Hippocrates himself very often used purging in Inflammations, as the principal Remedy, making no mention of Bleeding: Thus in this same Book (f. 2. 6. 64.) he orders purging in the beginning of a Pleurisie instead of Bleeding, when there is a pain below the midriff, which yet cannot be there without inflammation. To pass by innumerable places in the Book de *morb. Aff.* and others, wherein the Cures of Diseases are treated of, where he teaches that Inflammations infesting divers parts of the Body are cured only by Purging. To this difficulty I answer with the learned Vallesius; Although Inflammation, as it supposes multitude, do primarily indicate bleeding, yet sometimes Cacochymie does so prevail over plenitude, that for the sake thereof purging is to be preferred. Therefore when a pain extending it self to the Hypochondres intimates a great Cacochymie, omitting Bleeding he advises purging. In like manner l. 2. de *morb.* in a Pleurisie he prefers purging, if the Patient be choleric by Nature and unpurged, for in that case there must needs be a Cacochymie. And the same is to be supposed to happen in other Inflammations that Hippocrates would any where have cured by purging; whether it happen on the account of the part affected, which is apt to receive a Cacochymie; as for instance the Womb, in the Inflammations whereof Hippocrates commonly preferred Purging before Bleeding; or on the account of an evident Cacochymie, as has been said of Choleric persons, that have fallen into a Disease unpurged: nor need we in such like cases fear the inconvenience that Hippocrates in the fore-cited place teaches to happen by purging in the beginning of Inflammations; because as often as in acute Diseases (of which he there speaks) there is a great Cacochymie, it is for the most part a Choleric, which because of the thinness of the Humour is not so fixt in the part as utterly to resist a Purge, as Blood does; and if it do not yield to the Purge, the healthful parts are not colliquated thereby, seeing the Veins are full of the same Humour, upon which the Medicine acting touches not the sound parts, but by drawing the Cacochymie out of the Veins becomes a revulsory Remedy to that matter by which the Inflammation it self is fed, and that being drawn out, that which is fixt in the part is the more easily concocted and digested: which revulsion by purging has no place indeed in those Inflammations wherein there is plenitude, and not Cacochymie; which although it be in the part inflamed through transmutation of the Blood into a Choleric juice

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by the heat of the Inflammation; yet because it is constricted in it, it yields not to the Medicine; and the Humour that is in the Veins, is Blood for the greater part; whereupon the Medicine cannot act; wherefore it must needs be turned to the sound Parts and colliquate them, as Hippocrates says. As often therefore as the *genus venosum* abounds not with such naughty Humours as may be drawn by a Medicine, and that those which are in the inflamed Part, are so fixed therein that they will not at all yield to it, those inconveniences must needs follow that are reckoned up in that place. The knowledge whereof is derived indeed from many things, but chiefly from the Urine, which if they be thin and crude, indicate that the matter is fixed in the Part, and that there are no Humours in the Body that can be drawn out by a Purge, in which case we must abstain from Purging: but by no means if the Urine be thick or cloudy, for when these are present in any Inflammation, we must betake ourselves to Purging from the beginning. The present saying is therefore to be thus interpreted, That we must not (as some do) persist in its universality, so as that we should always abstain from Purging in all Inflammations whatever. Nor is Hippocrates condemned by receiving this Exposition, because he pronounced it universally; for he tacitly hinted that exception, when he added the reason of his Opinion, *For a Disease that is as yet crude, yields not, &c.* As often therefore as the Humour contained in an inflamed Part is of such a Nature as will yield to a Medicine, or finds an Humour in the rest of the Body which it may draw and carry forth, a Purge being taken colliquates not the sound Parts, nor is the Disease increased.

P. Martian.
comm. in l. c.

XIV. Some are of opinion that there is no need of such great strength of the Faculty for Purging as for Bleeding: but not meddling with other mens Judgments, I think that a strong evacuation by effective Purgers requires greater strength of the Faculties; because when such a Medicine is once given, it is no longer in the Power of the Physician; because it self also has a virtue that is adverse to the Body; and because Purgation is not performed without great commotion of the whole and dissipation of the Spirits. And though some, *where Hippocrates says that vacuation may be made even to swooning, apply it to Purging, yet I believe it has only place in Bleeding. For who could adventure to Purge even to swooning without rashness and danger of life, seeing none can promise himself that Purging shall proceed to swooning, and yet not tend to Death, inasmuch as there can no restraint be laid upon Purgers that can bridle their excess?

* Aph. 23. r.

r. or l. Inst.
Med. diip. 19.
3. 4.

XV. How can Purgation be performed at the beginning as often as the Urine shall be thick and cloudy, though there be no Concoction of the Humours, which yet is so suspected with thinness of the Urine? I answer, As often as the Urine is thin, it is a sign that nothing of the morbid matter is expelled with the Urine, either because it is thrust into some Part, and so closely fixt, that no portion thereof can be separated thence, which mixing with the Urine might make it thicker; or because Nature being intent upon the concoction of it, holds it so closely as to let none of it go from her. When therefore none of the noxious Humour is spontaneously expelled, it is an evident sign that it is so rebellious as by no means to yield to a Purging Medicine. But on the contrary, when thick Urine is made, it is a sign that a portion of the morbid matter is expelled with it, and this indicates that the remainder of it, though not at all concocted, yet is so disposed that it will obey a Purging Medicine. Yet it is to be noted that Purging is not always convenient as often as the Urine is thick: because, when this crassitude proceeds from Concoction begun, 'tis by no means lawful to purge, lest the concoction begun be disturbed; and this we discern,

because it appears not at the beginning of the Disease, but afterwards, and of thin becomes thicker by degrees: for in this disposition of the Humours, we must abstain from Purging. But when there is turgency, crudity hinders not Purging; as Concoction begun does: And therefore when the Urine shall be thin at the beginning, and afterwards shall become thicker by degrees, then it signifies that Concoction is begun; wherefore we must abstain from Purging, till there appear signs of perfect Concoction. Likewise when there ensues thickness of Urine in Fevers either from the colliquation of the Humours, or from malignant Putrefaction, or the like preternatural cause, neither is Purging good in that case. ¶ Hippocrates forbade that Purges should be given where there are no signs of Concoction in the Urine; now he gives the Reasons, explaining the harms that arise from unseasonable Purging; Namely, if you Purge unseasonably, the Urine will not be concocted, and the crises will not be made in due time; but both being taken away, I mean, Concoction and Crises, the Fevers will be lengthened: Quite contrary to what vulgar Physicians expect, who, when crudity of the Urine lasts longer than they would have it, presently Purge, thinking that Nature that is not able to concoct so much matter, will be better able to overcome it when it is made less, and take care to Purge their Patients before the Critical day, and therefore most on the sixth day; to the end namely that Nature may better perform the Crisis. But they are deceived, for Nature is then only made more powerful over the remainder by evacuation, when evacuation is made rightly and according to Art, as when a Pletthory is lessened by Bleeding, or Purging is performed because of turgency; otherwise there is nothing that can more hinder Concoctions and Crises: for those things are not evacuated that ought to be, but a great deal of good Humours is drawn forth, the bad are only stirred, by the stirring retention is disturbed, which being taken away, Concoction must needs be so also; and by the taking away of this, a fit expulsion and crisis is also taken away; because it is the order of the natural Faculties, that the retentive should minister to the concoctive, and when Concoction is finished that the work of the expulsive should succeed; otherwise all things will be done unseasonably and tumultuously, and therefore without benefit. Hence you will easily understand (which not a few admire) why, seeing the Ancients so much esteemed the Crises of Diseases, and writ so many things of them, so few occur in our days: Certainly this is the reason, because the most are unseasonably Purged, and unseasonable Purging takes away seasonable Crises.

Martian.
comm. in
Aph. 23. r.

XVI. As to the universal times of Diseases, we must know that evacuation is granted in the beginning, when the Humour is not as yet confused; but in the state and declination seldom; and not but by gentle Medicines: for if you administer a strong Purge in the declination, you will confound anew the Humours that have been already separated, and will make the sick relapse.

Valles Comm.
in lib. de viat.
Acut. p. 206.

Walaei m.
m. p. 27.

XVII. According to Trallian, Vacuation is not to be put off when there are any signs of Concoction: for thick Humours are over-concocted, and through their thickness become unfit for expulsion.

XVIII. As often as the whole mass of Blood abounds with a watry excrement, it ought to be freed therefrom by degrees, the evacuations of the same being often repeated both by Stool, and especially by Sweat or Urine; I say especially by Sweat, because all evacuation by Stool does more disturb and weaken the Body, than by Sweat, especially when water is to be evacuated, because that uses not of its own accord to tend towards the Siege, but to the Kidneys and Pores of the skin. For as Choler

is evacuated no way more commodiously than by Stool and Vomit, and not so by Urine or Sweat, so watry Humours are most fitly expelled by Urine and Sweat, and not so by Vomit or Stool: But pituitous and acid Humours seem to be conveniently enough expelled both ways, both by Stool and Vomit, and also by Urine and Sweat. If any desire to know the reasons of what is here said, I will give the following, and 1. *Choler* is therefore carried off more conveniently, easily and happily by Stool and Vomit than by Urine and Sweat, because it self is poured forth pure, and comes only to the small Gut, (and not to the Heart and the whole Blood) from whence it may be easily driven upward to the Stomach, and also downward to the thick Guts, and so be evacuated: But the same *choler*, when it is mixt with the mass of Blood from whence it should be separated, sticks closer to it than that it can be expelled out of the Body by Sweat and Urine, nor can it any more be parted pure from that mass. 2. As to watry Humours, as they are rather loosely confused in the mass of Blood than intimately mixt with it, so they may be easily separated therefrom, so that they may be expelled out of the Body as well by Urine as Sweat: And because water superabounding in the Blood according to Nature uses to be separated with the Urine, and not by stool, 'tis no wonder if the same may also by Art be more easily expelled by Urine and Sweat, than by Stool or Vomit. For though the Pancreatick juice, as also the saliva may from thence acquire a more fluid consistence, and so also increase the liquidness of the Humours that flow to the Guts; yet there seldom happens by this means and way any notable spontaneous evacuation by Stool of the watry part of the Blood, but pretty often by Urine and Sweat: And so also is an artificial evacuation of the same water more conveniently and easily attempted by Sweat and Urine, than by Stool or Vomit. 3. Thin Phlegm, such namely as has its origin from the saliva, may not only be easily drawn forth both by Stool and Vomit, but also by Urine and Sweat, because it is not so difficult to separate from the rest of the mass of Blood: And the more tough and clammy can be conveniently drawn forth no way, till it be sufficiently incited and attenuated; but then though it may be more plentifully carried off by Stool or Vomit, yet it may not inconveniently be drawn forth also by way of Urine and Sweat, which then uses to come forth more thick and clammy: which is a certain Argument that those ways are not unfit for the expelling a clammy Humour also. Lastly, an acid Humour, as it wants to be temper'd and corrected before it can be expelled any way; so then it may be most conveniently cast out by Stool and Vomit, inasmuch as when it abounds in the Pancreatick juice, it here finds a very short passage: but the same may no less conveniently be expelled by Urine and Sweat, because those volatil Salts that do easiest and quickest correct and temper it, do withal carry the same to the passages of Urine and Sweat, seeing all of them are Sudorifics and Diuretics.

Sylvius Pract.
L. III. cap. 9.

XIX. Among the Humours that differ from the mass of Blood, there is every where mention of a melancholick Humour, which they declare commonly to be of an earthy Nature. As far as I have been able to judge from an accurate and long observation of the Patients I have had the care of, and from a laudable evacuation of the Humours that produce the said melancholick Distempers, that is, by happily curing the said Distempers, I have noted two sorts of Humours on which those Distempers depended, not a little differing from one another, to wit *sour*, and very clammy Phlegmatick, partly by correcting, and partly by draining forth whereof, I have happily cured the said Distempers; wherefore I have thought that both ought to come under the notion of a melancholick Humour. And this di-

stinction is not to be slightly esteemed by Physicians that will practise, seeing if this be neglected, you will hardly ever cure Melancholicks as you desire: yea I am fully perswaded that melancholick Distempers are therefore so seldom happily cured, because most Physicians do not sufficiently observe that distinction, being too much addicted to their Authors, and over-neglectful of those things that happen in Practice. Now we must even for this reason attend to that distinction, because the same Medicines cannot always be profitably used both in the alteration, and especially in the evacuation of these two Humours: for *sour* Humours are best altered and corrected by volatil Salts and all the milder Aromatick plants; but the glutinous, also by acid Spirits, which do further corrupt and render hurtful the *sour*. So *sour* Humours are very happily evacuated by Hydragogues commonly so called, but the glutinous by Phlegmagogues. Whence any one may easily see of how great profit, yea necessity this distinction is for the right practising of Physick, seeing it brings great light both for the knowing and curing melancholick Distempers; as those will confess, who being employed in their cure shall compare what others have said and writ of this matter, with what I have. Therefore two kinds of melancholick Humours, require two sorts of Medicines to Purge them: To draw out the Phlegmatick, especially the glutinous, these are good, Ind. Myrobalans, Polypody, Dodder of Time, Senna, black Hellebore, LAPIS LAZULI, and LAPIS ARMENUS: To Hydragogues belong SOLDANELLA, the Berries, Seed, middle Bark, Root and Leaves of Dwarf Elder and Elder; Mechacan, Jalap, the Root of Flower-de-luce, Hedge-hyssop, ESULA, MEZEREUM, ELATERIUM, Gum of PERU and Crystals of LUNA.

XX. A Salt Humour is presently to be Purged, according to Galen l. de const. Art. because it cannot be concocted, for Concoction supposes crudity to be concocted, but a salt Humour is concocted, yea adust; wherefore those are presently to be Purged that are troubled with a salt distillation.

Epiph. Fer-
dinand.

XXI. The Purgation of acrimonious Humours should rather be indifferent than minute, for by small dribbling Excretions of acrimonious Humours it often happens that Dysenteries are caused.

Mercat. de
Indic. Me-
dica.

XXII. I think it adviseable, when a principal Part is ready to receive the matter, to withdraw it by little and little if it may be, and not to take care to keep it all for one Critical evacuation, but rather to prevent Crises by Art, as is often done.

Valles comm-
in lib. de
vict. acut.
p. 203.

XXIII. I began to find fault with that common error of our vulgar Physicians, when they bid us drain all the *choler* out of the Body: for from hence there ensues this mischief, that by taking away the principal condiment of Concoction, many have lost all appetite to their Meat, then have become Cachectick, and at length have died Dropsical. One man had three Sons that died Consumptive, which being dissected there was not a drop of *choler* found in the Gall-Bladder, though the viscera were unhurt: wherefore I laid all the blame upon the Diagridiate Medicines that had been frequently given.

Morbis ex
Anonym.
fundam. Phy-
siolog. c. 16.

XXIV. When *choler* offends, let the Dose of Purgers be small in the beginning, lest the *choler* that is very fluxile of it self, and turgent in a manner, should grow furious and produce a *cholera morbus*, or at least a great *Diarrhea*. For unless it appear that Phlegmatick and tough Humours do withal abound in the Body, in Purging of *choler* it is always safer to use Cholagogues in a less dose, and that for fear of superpurgation. Add, that though when Purgers are given in a less dose, they perhaps evacuate nothing, the same may be repeated, and the operation of the former promoted by giving others after a few hours, also in a small dose: which same thing, where there is no urgent necessity, may be done the next day only, seeing

seeing Purging Medicines have not only a vertue to evacuate vitious Humours, but also to alter and correct the same, and to prepare them for a fit expulsion. Now I diligently commend this precept to younger Physicians, &c.

Fr. Sylvius
Pract. l. 1.
c. vij.

XXV. Where there is a tough Phlegm, water hinders the operation of any Purgers: on this account Purges are most conveniently prescribed in the form of Pills; because Gums may be easily put in them which are the fittest of all Medicines to cut tough Phlegm, and are not easily dissolvable in any liquor; and thus at once the offending Humours may be both alter'd and expell'd. As for example, Take of Gum-Ammoniac, or Galbanum, &c. Prepared with Vinegar, half a Drachm, of Mastich a Scruple, of trochisc. Albandal, the resin of Scammony of each twenty five Grains, mix them, make twenty five Pills, of which give five or seven in the Morning with some Broth.

Idem.

XXVI. An acid Crudity will be cured by giving Medicines that temper or concentrate an acid Spirit; carefully abstaining from Purgers before the acid Humours are temper'd and brought to the nature of serum, which then being superfluous may easily at length be drawn forth by Hydragogues.

Idem.

XXVII. Though Spring and Autumn be the Principal times for evacuation of Humours for Preservation; yet let us Purge every one indifferently either in the Spring or Autumn, but let us see what every ones Nature and the Diseases that they are subject to indicate. For those who abound with thick Humours, are to be Purged in the beginning of the Spring: For such Humours being collected in the Winter are liquated or melted in the Spring time, whence unless they be evacuated, they may be easily diffused over the Body, and create great Diseases: But those in whom there are thin Humours, do well endure Purging in the end of the Spring, lest those Humours be inflamed in the following Summer and cause Fevers. When the Autumn draws on, acrimonious, salt, adust and scorbutical Humours are to be expelled, and that is the fittest time of evacuation for such as are distemper'd by tartareous Humours.

Erid. Hof-
man. m. m.
lib. 1. cap. 7.

XXVIII. Whether may we Purge on critical days? I answer, if there were no indication before, we may Purge on the 4. 7. 11. 14. and 20. day and also Bleed, for they will not prove Critical: But if these days be like to be Critical, we must observe whether Nature be about to attempt an evacuation on those days or no: If she make a perfect evacuation, let the Physician do nothing: But if she make an imperfect Crisis, mind whether she do it by Vomit, Sweat, Hemorrhage of the Nose, Fundament, or Womb; and then indeed we may assist vomiting with a gentle Vomit, Sweat by chafing, Bleeding by fomenting with warm water, or with Leeches; for these are in our power and may be stopped: But if Nature attempt an imperfect Crisis by Stool, it will be better for the Physician not to assist this motion, lest there be made a greater evacuation than is fitting, seeing a Purge once taken cannot be recalled, nor can we remove it: For Nature has this custom, sometimes to move leisurely at first, and by and by more violently. Wherefore it will be better to Purge the next day, that that which is left by the Crisis may be expelled. But if Nature be hindered from making any Crisis on a Critical day, if the matter be mitigated by (Pepasinus or) Concoction, let the Physician use Purging or Bleeding, if he know for certain that Nature will not do it. But you will say, according to Hippocrates, that nothing is to be moved on a Critical day: but he is speaking of such a day as Nature moves in, for the Faculties are wearied on that day by the force of the Symptoms.

Hieronymus l.
de febr. c. 14.

XXIX. That the influence of the Stars has great efficacy upon our Bodies, because of the circuit of the

whole terrestrial Globe and evaporation of moisture, seems to be intimated by Hippocrates 4. Aph. 5. In and before the Dog-days Purging is difficult. Indeed in our more temperate Climates there needs not so much scruple as in Greece, nor need we be so fearful of the barking or biting of the Dog: yet this curiosity is not to be altogether slighted, nor its foot-prints to be worn out.

¶ Fr. Bencius, who was the chief Physician in Italy of his time, (as Menardus relates it l. 2. Ep. 1.) never observed any thing of the Heavens; but as often as opportunity urged, he prescribed both Purging and Bleeding in the very conjunctions of the Sun and Moon, looking more upon the Urine than upon the Stars, and observing the beating of the Arteries rather than the configuration of the Stars: Whence it came to pass that being concerned in the Cure of a Person of Quality together with Hieronymus Manfredus, a famous Astrologer of Bononia, and there happen'd to be at the same time a necessity of Purging and a Conjunction of the Luminaries, the Astrologer gainsaying, and prognosticating Death to the Patient, Bencius order'd a Purging potion to be given, by which the Patient recover'd of his great Sickness.

Rolanc. l. de
febr. cap. 85.

¶ In the year 1643. in the Dog-days, about the beginning of August, three Children of two or three years old, being Purged with gentle Medicines by the Physicians that had the care of them, died convulsed the same day: Two of them were troubled with a Catarrh falling on their Breast, and the third with a Dysenterie. Other Children also from a Catarrh fell into Convulsions at the same time, and died the same day. Now these kind of Epileptic Convulsions are caused by the Humours that are colliquated by the hot Air. Hence it appears that we must use great caution in Purging the Sick in the Dog-days, according to the Precept of Hippocrates.

River.
Cent. 3.
Obs. 5.

XXX. Whether are Purging and Bleeding good in the Full or New Moon, as Hippocr. and Avicenna perswade? I answer, Though Galen observe not the change of the Moon, and the rising and setting of other great Stars, yet this indication is not to be therefore pretermitted, seeing it is of great moment and approved by the Experience of very grave Authors. For seeing we observe that the Moon and other Stars produce great changes in these inferior things, without any notable change of the first qualities that they induce upon the Air and our Bodies, it is clear that the indication taken from hence is not to be neglected; whence you will gather that at some times, when we would make some evacuation for prevention or in a mild Disease, we must abstain therefrom, if so be there be nothing urgent that may require the hastiness of a Remedy.

¶ Some shun the Full Moons, the Conjunctions, Quarters, and other states of the Moon in Purging: If such Observations can be made without detriment to the Patient, let a respect be had to those states: but if the Disease be urgent and there be present indications for Purging, mind them not, seeing Experience testifies, that Purges being given in the Change, Full or any Quarter of the Moon, have caused no mischief.

Zacut. intro.
it. ad Pra.
Præc. 48.

XXXI. In Summer and Winter we must not take Physick for Prevention; for in the Summer the Faculties are weak, the natural heat being drawn from the Centre to the Circumference by the external: in the Winter the Passages are strangled by the cold and the Humours concentered. Hence Avicenna 4. 1. admits not of Purging when it is extraordinary either hot or cold; for cap. 5. l. c. he says, when the greater Dog-star arises, and when Snow lies on the Mountains, we must not use Purging. But let the Physician consider the rising and setting not only of the Dog-star, but also of the Lyra (or Harp) of Arcturus, the Hyades and Pleiades; and let him carefully

Maneph. l. 2.
de febr.
p. 297.

fully observe the Solstices, Equinoxes, Conjunctions of the Planets, motions of the Moon, Eclipses and bad Aspects of the Planets; but yet not so superstitiously as some, who think it a heinous crime to give a purge when the Moon is passing through the ruminant signs of the Zodiac: for the partition of these signs according to the parts of mans Body is phantastick, against reason and experience.

XXXII. When we would purge for prevention, the Wane of the Moon, is to be chosen: for though in the increase of the Moon purging may be quicker and easier, whilst the Humours being then fluxile are more prepared for evacuation, yet it is not safer; but because there is fear lest the Humours being moved should rush Head-long into the Guts, and there should ensue a superpurgation, or boiling too much should flow into some other part of the Body; and because in the increase of the Moon the motion of the Humours that is made toward the circumference of the Body, is contrary to that which is caused by the purging: but in the decrease the Humours tend to the inner parts and follow the motion of the Medicine.

XXXIII. Note that before the Moon comes to a Quartile of the Sun (if there be no malevolent planet present) Purgers though gentle, do work more vehemently yet without impairing the faculties. Which is to be well observed in the Humours that have taken deep root, which are not otherwise easily extirpated by Purgers, even the strongest. The same thing falls out in the new Moon.

XXXIV. On the contrary we must abstain from all purging Medicines in the conjunction of the Moon, or its Quartile or opposition with Jupiter, Mars or Saturn. For seeing in all purgation there precedes a certain fermentation of the Humours, Jupiter through his gentle and slow operation does either retard it, or at least lessen it: and in all violent aspects of Mercury, viz. Quartile or Opposition, we must not rely on purging, because the Symptoms of the Head are apt to be raised thereby, as Vertigo, falling-sickness, &c.

XXXV. If the moon shall be in a Trine or sextile with Venus, it will be good to evacuate boiling Humours tinged with sulphureous dross; if with the Sun, the cold and moist; and if with Jupiter, the adust and tartareous. Nor is Jupiter to be excluded here, who is hot and moist, especially in the Wane of the Moon, and therefore he also makes towards the expulsion of tartareous Humours.

XXXVI. All these directions are of force, when we would purge only for prevention; but we may purge at any time when necessity urgeth: for if the vehemence of acute Diseases be urgent, or there be a turgency of Humours that arises about the Dog-days, which cannot be cured without Bleeding or Purging, certainly they are not to be omitted: for Hippocrates said not simply, that we must not then purge, but only that purging is difficult.

XXXVII. It is doubted also whether we must rather purge in the increase or wane of the Moon? I say it is more secure to undertake it in the wane; because although the Humours be fluxile in the increase, yet this motion that is made towards the Skin, is contrary to that which is raised by the Medicine; but in the decrease the Humours tend to the inner parts and follow the motion of the Medicine. (See § 32. before.)

XXXVIII. The dose of a Purger is to be found out by experiment; for the propriety and condition of Bodies is various: we must therefore ask the Patient whether he have taken a Purge at any time when he was sick, and whether it wrought enough and according to desire, or not. If you understand that the Patient was very easy to work upon, then use the more gentle Medicines, or

in a smaller dose; but if he had but few or no stools, then use stronger, measuring the dose of the Medicine in regard to the temper of the Body. Moreover the more or less apt to be soluble his Belly at present is, the Medicine ought to be stronger or weaker. But if a man have never been purged before, we must learn how dry or moist his Belly is, that by taking our indication thence we may the more certainly measure the dose of the Medicine.

¶ We must note what every ones peculiar Nature can bear, for all bear not the same Remedy alike: for some Bodies contain the virtue even of the most powerfull Medicines; others are wrought upon by the weakest: therefore the cure is always to be begun with the weaker, both that Nature may be accustomed to Medicines, and the sense of the Patient may be found out.

¶ If the Physician be unacquainted with the Nature of the Patient, namely whether he be easy or hard to Purge, Spigelius bids us mind the Patient's Feet, and to gather his easiness to be purged from the length of them, and his hardness from their shortness; which indeed is something, seeing they are weaker: but the whole truth consists not herein. Others bid us consider the breath of the Patient, which if it be gentle and delicate (unless the Patient be Melancholick) intimates Purgation to be easy. It is best to ask the Patient whether he use to go every day once or twice to stool; if he say yes, he is easy to purge; if no, difficult.

XXXIX. Many wonder why I prescribe purging for three or four dayes together, seeing most hitherto have been content with one day: I answer that three or four gentle purgings are to be preferred before one strong one; for on the first day they will purge the first region, that is, the Stomach and Guts; on the second they will evacuate the Liver, and open its obstruction and stuffing; on the third they will cleanse the Veins which are indeed the Store-house of that colluvies that causes Diseases and Death: This manner of curing does insensibly destroy inveterate evils without hurting the Parts, yea they are rather strengthened by this slow depletion; which evils the more vehement Medicines with all their violence and perturbation cannot remove, and which the Ancients left as incurable.

XL. When Purging does not follow upon Medicines that are not very weak, there is reason to fear lest the excrements being moved, and not evacuated should be carried into some noble part, and there cause some worse Distemper.

¶ Purges given in too small a Dose do more harm than good, and they do nothing else but attenuate the Humours; and these being attenuated, when through the defect of the just Dose of the Medicine they cannot be expelled, rush all the Body over and disturb it.

XLI. Those err greatly who always begin their Cures with Purging: Those Expurgators think upon nothing but driving vicious things out of the Body, as if the matter were to be done by the hand and nothing could hinder: they are not content with that Minorative Purgation that is never to be parted with, which they always undertake in the very beginning of the Cure, at all times of the Disease; but they would every day abuse a Purging Medicine, if the Patient would obey every day, without any respect to Concoction or other Preparation: These forsooth think all that the Ancients have Philosophiz'd concerning Concoction, to be mere trifles: They only look at those things which pass out of the Belly, and the worse those are, they think the Patient is the better treated, whereas in the mean time they colliquate the Bodies of many: These truly are not to be suffered.

XLII. Of

XLII. Of those who are not Purged by a Medicine, some are not much hurt, in whom namely nothing more is done but either the Medicine is too much conquered by the Concoctive Faculty, and so being distributed with the Aliments turns to nourishment; or being not enough deduced into act, it passed out downwards: Others are hurt very much, as having the Excrements drawn to some inward part that is affected, or moved and roiled all the Body over. ¶ Those who labour under Diseases of some Parts depending on some vicious matter, are then most helped by Purging when a Cacochymic of the whole Body feeds the Diseases that are in the Part: But when the Humours are already fixt in the Part and the rest of the Body pure, we must rather trust to particular Remedies, and a good Diet, and the benefit of time; for the Bodies of such, as being sound, indure Purgings ill; and that which is impacted in the Part, yields not: whereby it comes to pass that many of them are hurt with Purges, because the Faculty is weakened and the Disease remits not.

Vallef. s.
Epid.

Idem
ibid.
p. 519.

Hipp. s.
Epid.

Vallef. com.
in c. l. p. 505.

Martian.
com. v. 246.
sect. 3. l. 2.
de morb.

XLIII. Symmachus's Son being suffocated by choler in his Sleep and seized with a Fever, and not keeping a Purging Potion when given him, was neither Purged in six days, nor before he died. ¶ This Person seems to me to be therefore not Purgeable, because there was a redundance of Choler and it was carried upwards; and I think this was the very cause of his Death, that Choler seized in abundance on his Head and Heart, and there was no place for Remedy. But how can it be, that redundance should hinder purging, for it seems apt rather to cause too great evacuations; and doubtless it was that which hindered the retention of the Potion? When this Person was suffocated in his Sleep by the multitude of Choler (which shewed that much of it was carried towards his Head, and that it abounded in the upper Parts that are about the Breast and Head) and kept not the Potion that he drank, nor was purged, it is reasonable to think that the redundance of the Choler in the upper part of the Stomach hindered the Medicine from being kept; and when retention and traction was taken away, that Purgation was also taken away: What therefore was to be done by the Physician in this case? Certainly he was not to rely on one strong Medicine, but evacuation was to be made by degrees, by often repeated Vomiting.

XLIV. I know that in Sickness Hippocrates was often wont to purge the Humours by the region which was farthest off from the part affected. Thus lib. 2. de morb. in the Disease called *Siccatory*, that was like an Hypochondriacal Distemper, he first begins evacuation downwards, and then finishes it upwards; the contrary whereto 'tis clear he observed in Distempers of the Head; for in that case he first vomits, and then purges downwards: the reason of which difference depends hereon, That evacuation is to be begun at that part that is next to the part affected, so that in Diseases that infect the parts below the Midriff, we must begin with purging downward; but with Vomiting, if the Disease possess the upper parts: But this is to be understood when the Disease needs both evacuations.

XLV. The vulgar way of purging *per Epicrasin* (or by gradual purgation) does not please me, when they give a Purge on every fourth, fifth, or seventh day, or once a week: for this way the Medicine will only on the first day carry forth what is contained in the first ways; and before the second Purge come, the same excrement will be collected again in the same ways; and it will fall out in like manner before the third and the rest; whereby it comes to pass that the virtue of the Medicine reaches not to the part affected which we intend to evacuate. Wherefore 'tis fitting we should purge without intermission, that at least the

second, third or fourth purgation may reach the place affected, and may lessen the matter of the Disease: by which manner of purging many are more happily cured of the greatest Maladies, than by any other Remedy. Hence in Diseases of the Head, Breast and Lungs; in Diseases of the Joynts; in inveterate obstructions, madness and other distempers purgation *per Epicrasin* is more safe and profitable than any other: in which distemper it is fitting every day for 7. or 8. days together to take some Purge, that what is situated and stufft up in the more hidden and inward parts, may be exhausted by degrees, and that without hurt to the faculty.

XLVI. Hippocrates 1. aph. 22. says, that crude Humours ought neither to be moved nor Purged. Under the word *moved* he comprehends not every motion, for then it would follow that during the crudity of the Humours, neither a Vein should be opened nor a Clyster injected, which is repugnant to his Doctrine: therefore he meant that commotion which is brought upon the Humours by the purging faculty of Medicines, whilst they are placidly drained out of the Body: as if through the lenity of the draining such evacuation deserved not the name of purging. Nor is it a new thing that this word *moved* should be restrained to purging only; for Hippocrates used it in that signification 3. *Politic. cap. 2.* In Egypt, says he, after the third day Physicians may move; if before, they do it at their peril: and perhaps he rather used this word than another, because they used to purge lightly about the beginning, which is customary in our times: whence the more modern Physicians distinguishing the Medicines that cause such light purgations from the stronger, have called them sometimes Lenients, sometimes Minoratives: & Hippocrates called these same sometimes light Purgers, sometimes Subducents, sometimes looseners of the Humours, as we may gather from his Books of Practice: which if most later Physicians had well read, they would not have boasted that such Medicines were unknown to him, by which pretext perverting the whole Doctrine of purgation, they have brought the matter to that pass, that no precept nor distinction is observed about the matter of purgation: for they presently give their Minoratives to all without distinction, finding fault with those that by a convenient distinction do sometimes abstain from them.

Pr. Martian
com. in dict.
aphor.

XLVII. 'Tis worth noting that heaviness of the Body, whether with a Fever or without, does indicate purging, as intimating plenty of Choler, which hath settled in the Veins and joynts, as Hippocrates says lib. de affect. yet in such as have no Fever it requires bitterness of the mouth to be joined with it, because otherwise it may have another cause. Yet this will seem strange to vulgar Physicians, who as soon as they find a sense of heaviness in Fevers, presently come to Bleeding, thinking this to be the certainest sign of a plethory, being taught by Galen lib. de plenit. c. 2. But they are deceived, as appears by the authority of Hippocrates, and as daily experience confirms; and as we clearly observed in the Fevers that went about in the year 1622. whose chief symptom was gravity of the whole Body, and especially in the beginning: now Choler was so predominant in these, that not only all the excrements appeared bilious, viz. their Vomits, Stools and Urine, but also all the other Symptoms, want of sleep, Head-ach, deliriums, bitterness of the mouth, yea and breakings out or pustules most of them of a yellowish colour: whence we thought their chief Remedy to be purging, omitting Bleeding.

Idem comms.
in v. 142.
loc. cit.

XLVIII. Purgers, in those Diseases wherein Nature is wont to have no crisis, such as are some long continued Fevers, some internal Inflammations, the French-Pox, the falling-sickness, Vertigo and other like, may be safely given in the augment and state. Therefore I adhere not to their opinion that affirm that

Hot. Aug. n. that we must never purge but in the end of the state or beginning of the declination.

XLIX. A young man of a Sanguin complexion, after Bleeding, and preparing potions, took in the morning an easie purge made of Rhubarb, *Diaphanicon*, with the Syrap of fumitory and *Senna*: After two hours he was oppressed with a great pain in his Belly, which was eased by having two stools: after an hour he went five times to stool very plentifully, but did so burth with an inward heat that he thought his Bowels were burnt up: there ensued a very high Fever, an unquenchable thirst, a cruel pain of the *Mia*, so fierce that it interrupted his breathing and voice. The Physicians are called, they apply Anodynes to the pained part, prescribe lenient Clysters, apply Cupping-glasses and other diversions to the Thighs; but all in vain, for the pain raged more. I am called also, and advise Bleeding, for the faculties held out pretty well: all are against it, for two contrary motions are not to be celebrated on the same day. But seeing the cruel pain increased, necessity compelling, my advice was follow'd: being bled the pain was eased and the Fever remitted.

Zacut. Prax.
adm. I. 3.
Obl. 8.

L. 'Tis an unreasonable custom with most Physicians to administer purgers without distinction in all Affections raised from wind: as we commonly see in Hypochondriack Melancholy, and in those who suffer great pains of their Head or Stomach, or *nauseas* and subversions and such otherlike Symptoms from wind; wherein that we may purge without mischief, we must distinguish whether the pain or any Symptom arise from wind, which a weak faculty may not breed, whilst the matter keeps a mediocrity in quantity and substance; for whilst it does so, and yet *status* are raised which cannot be dissolved, 'tis a sign that the weakness of the faculty is more in fault than the matter: at which time 'tis a great error to use purgers, and is forbidden by *Hippocrates* 4. *Ac.* 1. 115. For by them the natural faculty is further weakened and dissipated, and so through impotency generates much wind of any matter, as we generally observe in Hypochondriack Melancholy, where the faculties must needs be weak, and the Humours disobedient to weak Medicines, and yet they are made ungovernable and more malignant by the more vehement: whereby it comes to pass that such Patients are worse by these, both because these Medicines neither purge *status* nor take away the Disease; and also because they weaken the faculty and make it the apter to breed wind. But if wind arise rather by the fault of the too thick matter than from weakness of the faculty, I think it most adviseable to use Purgers. Wherefore if *status* be generated in the Stomach or other part through weakness, I think it safer to use strengtheners and dissolvers than Purgers.

Mercat. de
Ind. Med.
L. a. c. 6.

LI. The ingenious diligence of some hath invented a conjunction of Narcoticks with Catharticks: for though it be confessed by all, according to *Galen's* opinion, that sleep stays all evacuations except those of sweat and the Seed, and that Narcoticks hinder the operation of Purgers, and therefore are a present Remedy for an *hypercatharsis*: yet it is found out by experience, that after a gentle sleep caused by a Narcotick, the innate heat being collected in that time, there follows a most successful exclusion of Humours, by virtue of the Cathartick joyned with the Narcotick. ¶ In a vehement pain of the Stomach *Alideus* in *Forelius* mixes purgers with Narcoticks, that the pain may both be allayed, and the offending matter withal expelled. Take of *Diaphanic*. half an ounce, *Philonium Romanum* two scruples, with the water or decoction of Chamomel make a potion. Also in the Colick *Riverius* (prax. l. 10. c. 105) prescribes this: Take of the best Aloes a drachm, of Laudanum Opiati four grains, of *Diagradium* six grains, mix them, and make pills to be given at a conveni-

Alex. Deed
Valeud.
p. 17.

ent hour: they allay the pain in an hour, and afterwards evacuate the Humours.

LII. A Sudorifico-cathartick Diet-drink is a decoction that provokes sweat and withal evacuates by stool. It is an invention of Modern Physicians, and hardly used a few years ago, yet not invented without the hope of very great benefit: seeing by the help hereof the thinner part of the Humours being resolved by sweat, the thicker that remain, which otherwise use to stagnate stubbornly in the Belly and other parts, are by this means profitably eradicated withal. Nor need any exclaim against divers and contrary motions; for the natural heat, that is the instrument of the excretive faculty, together with the expulsive bears it self indifferently to all motion or situation, and when the Medicine twitches or draws, rises up to the expulsion of the moribick matter by all the ways that are open, as experience confirms.

P. Morellus
Meth. prae-
scr. form.
tem. fecit.
l. c. 13. Sed
a List of
Approvers
in Velschius's
Sylloge obf.
84.

LIII. Some deny that Lenitives ought to be mixt with Purgers, for instance, *Cassa* with Agarick, because Lenitives are *to genere* less powerful than Purgers and of a slower operation; therefore some first give Lenitives alone, and then Purgers by themselves, namely with such a distance of time betwixt as they think may bring them to work at the same time. But they are deceived. For those Medicines that are only Lenitives, seeing they do not purge, but by their slipperiness and glibness carry down the Humours, have no proper time of operation: but if there be any other thing, joined with them that may excite the Belly quickly to excretion, Emollients pass by speedily; if not, slowly: therefore being mixt with Purgers, according to the virtue of these they will pass through quicker or slower, and they will go before softening the ways, and by their slipperiness gently drain forth, what the Purgers shall attract, which was the only benefit that was expected from the mixing of these together.

Vallef. cons.
l. 9. c. 41.

LIV. Purging is kindred, either because the Medicine is not dissolved because of its solidity; or because the natural heat, especially of the Stomach, is so weak as not to put it into act; or from the same weakness the expulsive faculty is not strong enough to move the Humours. Hence is a reason gathered why Elective purgers that are strong and given in a large dose, sometimes purge less than those that are weaker: for the stronger the Medicine is, the stronger it requires the Natural heat to be whereby it may be deduced into act. There is another reason, why many Purgers, and given in a large dose, sometimes work less than a few; namely because they are overwhelmed by the multitude of Correctors and Alteratives that are mixed with them: for every *menstruum* designed for extraction, draws out as much as it can; and so it ought to be proportioned and specifick with respect to the matter to be drawn forth. So that, though, (for instance) you infuse a whole ounce of *Senna*, adding many Correctives and Alteratives, you will have a less effect than if you drunk an infusion of two drachms only in wine: understand this of infusions and extracts: for nothing acts beyond the bound of its activity.

Hoefst. Med.
Med. l. 7.
c. 2.

LV. A late way has been invented by some Moderns of injecting Purgers into the larger Veins, and communicating them to the Heart and whole Body by means of the circulation. *P. I. Sachs* hath given us the experiment and manner of administration in his *Oceanus Microscopicus*: through a pipe made of Larks bones, the one end fitted to an oxes Bladder, the other inserted into the *Vena mediana*, or some fair Vein of the Foot, is a purging liquor poured in; by squeezing the Bladder: when the liquor is injected, the hole is stopped: thus the liquor is communicated to the Heart, and a purgation follows in a little time.

LVI. *Bertrandus*

LVI. *Bertrandus Rozius* in *Saler.* c. 129. transfused into his Wife the force and vertue of a Medicine with his Seed. I remember that the same happen'd to a Noble Man at *Orlean* in *France*; who lying with the Wench that brought him some gruel an hour after he had taken Physick, insinuated into her the efficacy of the Medicine, so that she was purged violently ten times upwards and downwards.

r. Dan. Horst.
obl. Anat. 10.

LVII. Purgations as they are sometimes necessary, so where they are frequent they bring danger; for by them the Body is used not to be nourished, and for this reason it will be infirm, seeing infirmity is most obnoxious to all Diseases. *Celsus* l. 1. c. 3. Besides these things which *Celsus* writeth, Purgers drain moisture from the Body, whereby the Body is wasted and old age is hastened, and the Belly also becomes cōstive through dryness. Wherefore *Galen* 3. aphor. 15. If any one fearing lest many excrements should be heaped up in his Body, do use Purging twice, or at least once a Month, besides that he will bring his Body to an evil custom, he will also weaken it, &c. And *Avicenna* l. 1. f. 3. doct. 2. c. 1. Physick purgeth and inveterates: Which is chiefly true of the stronger Medicines that they used in that age, and that many use in ours, whilst they take Antimony, &c. Nor signifies it any thing what some say, that they take only a few grains, because seeing it is necessary that the Medicine be such as to overcome the inward heat, and not to be overcome by it, (for then it would not purge) it is necessary also to infer that there is the greatest contrariety betwixt such Medicines and Nature; and the fewer grains will do it, the greater must be the contrariety; and the more frequent the use of them is, the more is nature hurt.

Rubeus
comm. in l. c.

¶ We must sometimes abstain from the use of Purgers, though the body be foul; for some bodies, if they should be purged for a whole Month, would never be pure. Sometimes nature is sustained even by an impure blood, which happens in the cachectick and phthisical, whose life is sometimes prolonged for many years without Purgers.

Crato apud
Scholtz.
Epist. 13.

LVIII. Before purging, if the disease grant Truce and time, the humour is to be prepared and the ways to be opened. Thus it happens in burning Fevers, as also in melancholick diseases, that the excrements of the Guts are sometimes so dried in them, that they wholly stop up the way for carrying the humours forth: and unless you remove this stoppage by a Clyster, or correct it by adding a Laxative, what you do is to no purpose. It is sometimes necessary also to fence the Intestins, not for fear they should be corroded by the acrimony of the humours, for this is seldom done; but because some Medicines by their caustick vertue may hurt their coats, such as *Vitriolum Martis* and others.

Waleus m.
m. p. 40.

LIX. It is the best to give a purge in that part of the day wherein the vertue of the Medicine cannot be intringed; which is when our stomach is empty: Excepting resinous Pills, and some Medicines that are apt to run together in the stomach, and therefore have need of some liquid for a solutive (I know that sometimes sixteen grains of the Rosin of Scammony have been given to a child-bed woman, which yet for the said reason have not at all loosened the Belly) and of lenitive Medicines that require some chewing, as *Manna*, *Cassia*, &c.

aleus m.
an. p. 38.

¶ I have commended purging Medicines taken a little after meals, but in a less quantity, and with an intent to procure but few Stools; but the same are not to be given in a large quantity, and for the procuring of many stools in a short time: for in such case I would have them taken on an empty stomach. We must therefore distinguish both between Purgers (& sudorifics) when used in a less quantity, and which may serve in the place of Alteratives when they expel nothing; and the same given in a

larger quantity, for the performing of a notable evacuation in a short time: for nothing hinders why those may not be mixed with aliments, but these not so.

Sylv. de le
Boe Append.
tract. 4. §
245.

LX. Though according to *Ægineta* l. 7. c. 6. in all thorough Purgations we must give the Medicine fasting, and when concoction is perfectly over: yet we must note, that in the *Picrocholi* or such as are of cholerick and rare natures, that fall into a Swoon or *Cardialgia* through the acrimony of a Medicine and the confux of humours to the stomach, it is safer before the taking of the Medicine to give some aliment, which yet for its small quantity may not very much employ the digestive faculty, and may strengthen the mouth of the stomach that is very sensible, as broth of a Pullet, or Ptisan with the juyce of Pomegranats; or give a mouthful of toasted Bread moisten'd with wine, as *Avicenna* 4. l. c. 1. §. 1. advises.

G. Horst. in
instit. disp.
p. qu. 8.

XLI. *Hippocrates* l. de Hum. v. 4. amongst the hindrances of Purgation reckons up emptiness of the Bowels, by means whereof the Medicine that is given to purge, comes to be attracted by them, so that the purgation goes not forward. On the same account, *lib. de purg.* v. 30. he has condemned purging in strong Fevers, because their flesh and Bellies being hot receive the Medicine, and they are nothing purged; wherefore what the Febrile heat is the cause of in this case, is in the former attributed to emptiness. Whereby the unprofitable diligence of some Physicians is condemned, that prescribe fasting at even to those that are to take a Purge the next morning: not minding that the contrary is commanded by *Hippocrates*, who would have Bodies to be disposed for purging by much Meat and Drink: for so the Humours being diffused by the Meat and Drink, do the more readily yield to the Medicine, and the danger is avoided of the empty Bowels drawing the Medicine to them. Yet I deny not but that too much satiety is to be avoided, especially when the purgation is to be made downwards, lest the stomach being full do more difficultly sustain the Medicine: for *Hippocrates* says in the same Book, that the repletion of both the lower and upper parts of the Belly forbid purgation, yet emptiness does it far more.

Martian
com. m. l. c.

LXII. Not only before purging (which *Hippocrates* seems to have commanded, *aph.* 9. l. 2. when one will purge Bodies, he must make them fluid; and there being divers ways to make a Body fluid, this by previous Clysters is not to be despised) but also after it, for deterging the remainders of the Humours that sometimes stick to the Guts, it will not be unprofitable to inject a slight and deterging Clyster, as the best Physicians advise; for the injected Clyster rinses the Guts as it were, and takes away the harm that was left by a stronger Medicine, especially if it were of that sort that have Scammony in them; for that by its acrimonious faculty uses to hurt the Guts: and there is the same reason of all the more violent Medicines.

Primiros.
Err. popul.
l. 4. c. 20.

LXIII. If thick Phlegm be to be purged, *Colocynthis* is most profitable, and *trochisci Albandal* made of it, as also *Hermodystils* and gummy Turbith, with an addition of *Merc. dulcis*. For, that I may note this, in pituitous Humours, and indeed in thick Phlegm, all Mercurial Medicines are good, but not so in *Cholerick*, for in these, *Antimonials* are deservedly preferred, and may be conveniently made use of for all Humours.

Sylv. de le Boe
prax. lib. 2.
c. 22. §. 62.

LXIV. 'Tis very doubtful and uncertain to guess at a fit time for giving Purging Medicines: The Physician is often ignorant of the motion and organ of Nature; whence, when she is preparing her self of her own accord for the expulsion of noxious Humours, if the Physician being ignorant hereof give a Purge, the Patient is cast into danger of his life. A Matron took a decoction of *Senna* with

with Prunes for her usual preservation, whereby was caused so large a purgation that it degenerated into a dysenteric that was then popular, which killed her three days after. Though it may be that great looseness might have happen'd without taking any Purge, yet when matter is stored up, it may be stirred up and compelled to expulsion upon the least irritation.

LXV. Hippocrates forbids Purging to them that are very much troubled with Pains, till the Pain be either allayed, or at least abated; because there is danger lest the Humours being moved by the Medicine, should through the vehemence of the Pain be rather drawn to the pained Part, than expelled by Stool by the virtue of the Medicine. A Precept that is neglected by most Physicians to the destruction of men, yet every where observed inviolably by Hippocrates, as we may see l. 1. de m. mul. f. 3. v. 148. l. 2. f. 3. v. 303. de int. f. 2. v. 29. and in many other places: for he first appeases the Pain, and then Purges.

LXVI. If a Physician prescribe to a Woman with Child any Medicine that Purges hastily, the force of Nature will cause an Abortion: Pills are the longest of working, next to these, Powders; then Electuaries; but the quickest of all are Potions: We must therefore give to Women with Child Pills, or the more gentle Powders not long before meal.

LXVII. If one intend to Purge a melancholick Person, unless he add Looseners, he shall not obtain his end. A certain Practitioner gave a Purge to a melancholick Person three or four times, and yet purged him not at all. An old Woman coming advised to take a Decoction of Senna with Prunes. He that would Purge a Phlegmatick Person, will find it necessary to add stimulating Medicines. A noble Lady, fifty years old, wanting a Purge, consulted me; and tells me that she was not moved even by the strongest Catharticks: that another Physician had often try'd to Purge her in vain, who had prescribed her, as she said, what would have Purged an Horse: She was strong, and her hair black and curled: I advised her to take before Supper six Drachms of Elect. Cathartic. with half a Drachm of Cream of Tartar in the form of a bolus: whereby she went six times to Stool, nor did she afterwards make use of any other Cathartick, having always the like success with it.

LXVIII. When both Phlegm and Choler have transgressed their natural bounds, Choler is never to be Purged strongly neglecting the Phlegm, for the Phlegm is warmed by the heat of the Choler. I have known some die of an Apoplexy by having the whole Oeconomy of their Body inclining to Phlegm through the long-continued and much use of Rhubarb and Manna; for Choler and Phlegm temper and bridle one the other. All things in the great World would grow stiff with frost, if they were not cherished with the heat of the Sun; now what the Sun is in the World, the same is Choler in the Body.

LXIX. N. N. minding to Purge his Body when the Spring was drawing on, taking a violent Purge there was presently a translocation of the Humours made into his right Foot (which before was weak by having indured a vehement cold) which Humours by their malignity and plenty suffocating the weak heat of the Part, brought upon it a sudden Gangrene. Hence you may learn that it is dangerous to attempt with churlish Medicines Bodies that are filled with impure Humours, and are either weak by Nature, or have been made so by some external accident. A Minister, though in health, would needs take a Purge, whereby his Humours were presently so disturbed, that he died in a few days after: for when naughty Humours are wanting, these Remedies disturb the good. See Aph. 2. 62. and 16. 4.

LXX. In compounding of Medicines we must

see (according to Hippocrates 2. Ait. l. 11.) that they be all *homogeneous* of a like condition, such as may exert their Vertues in an equal space of time; with a like distinction of the Faculties, and a like force; so that one may not make haste and go before, and another linger behind: for by that means there will be perturbations and tumults in the Belly, Humours will be stirred up and produce grievous Symptoms: As if for thick Humours you give the Pods of Senna with the Seeds of Anise and wild Carrot, and add to the liquor after you have strained it, Syrup of Roses: for such Syrup brings forth the Senna and leaves the thicker matter and makes it more stubborn. Hellebore and Myrobalans endure not one anothers company. Such things as bring violence upon the Body, ought not to be detained long in it, wherefore they are not to be mixed with astringents, but rather with other things that Purge briskly.

LXXI. The Stomach is very much hurt by Hellebore and other violent Purgers, especially its attractive Faculty: Whence it comes to pass, that whereas naturally it ought to attract Aliments, being imbued with the evil quality of the Medicine it draws to it self vicious Humours and such as are agreeable to the vertue of the Medicine, and is readily filled with them; wherefore unless thenceforward he be Purged again by intervals; this vicious attraction of the Stomach is the cause of many Diseases.

LXXII. Walaeus (m. m. p. 40.) commands the Body to be moved up and down when we take a Purge: for, says he, all rest, or sleep, even in the beginning, hinders Purging. Yet I know that Purgation is hindered in some if they forsake their Bed, and that the effect thereof is forthwith intercepted by that means: Namely, the warmth of the Feather-bed conduces to the fusion and colliquation of the Phlegm, and to its exclusion out of the Body.

LXXIII. I do not disallow of warming Purging potions before we drink them, for so they seem sooner to begin their Operation and to be reduced into act. But yet they may no less conveniently be drunk cold in the Summer time, by such as have an hot Stomach: For very many Purgers that enter the composition of these Potions, do not so well endure boiling, and their vertue exhales by a gentle heat, at least is dulled in part: as appears in Rhubarb, which is made more sluggish if it be set on the fire; as its Extract teacheth, which is made first by infusion that draweth forth its tincture and vertue, and afterwards by gentle drying is reduced to the consistence of an Extract: for some Drachms that are sufficient for several infusions, are hardly enough for one Dose of the Extract, because by drying the infusion the Cathartick vertue vanishes also. Add, that a cold Potion is both more grateful, and is better retained by the Stomach.

LXXIV. It has been the opinion of some that cold water should presently be drunk after having taken a Purge: Bourdelotius a Parisian Physician, endeavoured to introduce this Custom in the North, because he believed that the vertue of the Medicine was thereby increased and promoted; and the malignity of Medicines corrected. I could not consent to his opinion, because amongst our Northern People the Stomach is not so hot, that it has need of a cooler upon taking a Medicine: We should rather advise hot drink, that we use to give after an hour or two, if the vertue of the Medicine be more sluggish.

LXXV. Nothing is more pestilent or calamitous than to feed too freely after the Purge has done working; because Concoction and Distribution are vitiated, for Nature hath sustained the force of a disturbing Medicine, whence she is become languid and dull; and also because perhaps you tyed him to short commons before he took it. If there-
fore

T. Barthol.
cent. 3.
Hist. 93.

Martian.
comm. in
v. 396. l. 4.
de viat. ac.

Walaeus m.
m. p. 51.

Idem p. 50.

Heurn. Meth.
l. 2. c. 25.

Horst. l. 9.
Obs. 25.

Borel. obs. 45.
Cent. 2.

Heurn.
comm. int.
l. 1. a. v.
ac.

Rondelet. m.
cap. l. 1. c. 41.
See Vallef.
contr. l. 9. c. 4.

Crato apud
Scholtz. conf.
3. m. p. 1.
m. g. h. d.

Primros. de
valg. err. 4.
c. 14.

Barthol. cent.
6. h. ft. 45.
Se. Primros.
error. pap.
l. 1. c. 13.

I. Heurn. 2.
de vict. ac.
comm. 13. 3.

Stregh. in
Med. Pract.

Propter Mar-
tian. comm.
in v. 68. l.
1. Acutor.
See Valer. 3.
Epid. p. m.
455.

Pr. Martian.
ibid.

Crucius de
Qualitis
cent. 3. p. 259.

Martian.
comm. in v.
73. l. de hu-
mor.

Valer. l. 3.
Epid.

fore you shall let him eat freely now, his Belly will be stopped, and there will follow a confusion of all the Vessels; and the first Concoction is not amended by the second: Therefore presently after the Purgation allow but a little, and afterwards more by degrees.

LXXVI. Whatsoever nausea is raised by any Purging Medicine, chew a Wall-nut Kernel immediately upon it very well, and it will presently go off.

LXXVII. It was usual with the Ancients to omit their Dinner on that day they took a Purge, or Purgative Clyster, as we may collect from divers places of Hippocrates. It is not indeed to be affirmed that this was done without reason, for it was for fear Purgation should be interrupted by the Aliment that was taken: for by taking Meat, perfect Purgation is interrupted, which is perfected by fasting following: for though a Purge draw forth Humours from all the Body, yet the lower Belly is more evacuated than other Parts, though in Progress of time all the Body be equally emptied. Wherefore if one eat presently after Purging, before the emptied Belly draw from the Body, complete evacuation is hindered, wherein the perfection of Purging consists: whence our Physicians offend in this, that they grant a Dinner on the Purging day, so that it is no wonder if perfect Purgation very seldom follow.

LXXVIII. From which rule later Physicians beginning to depart, began to give Broth to some instead of a Dinner, that they might avoid a total fasting: And hence, if I mistake not, came the use of giving Broth after Purging: But our Physicians, retaining the use of Broth, do an hour after it allow a Dinner with a double error, and that often in the middle of the Purging: an evident sign whereof is, that they are purged after Dinner, so that the Purgation was not finished before.

LXXIX. On the day that any takes a Purge, let him refrain from Salt, or from Broth that have any Salt in them, upon a twofold account, 1. Lest he be made more thirsty than he can well endure, according to that of Hippocrates 54. Aph. 19. *Whoever having been Purged are not thirsty, are not at quiet till they be so*: 2. Lest there be caused a superpurgation, for Salt doth excite Nature being dulled, and keeps the Belly loose; so that it is to be feared, lest on the Purging day, by adding a spur as it were, it should increase the Purgation.

LXXX. Whether shall a man sleep or wake after he has taken a purging Medicine? If the party have a strong, hot and brisk Stomach, there is no necessity of sleeping; but if his Stomach be weak, sleep is to be granted, because according to Hippocrates 6. Epid. s. 6. text. 3. the Blood in sleeping retires inward, whence the inner Parts become hotter, and thereby the Purge will be better brought into act.

LXXXI. We know that there is a perfect evacuation when the Excrements that come out last, are contrary to those that came out before: As for instance, If a Cholagogue Medicine be given to any to Purge choler, when pituitous Excrements come forth after bilious, we know that there has been a perfect Purgation: Which my self having sometimes observed in Purgations, I have foretold the term of the evacuation to the Patients with admiration.

LXXXII. When we are sensible that the Purge any one has taken is too strong, it is a very great Remedy to drink a good deal of water hastily, and before it is settled in the bottom of the Stomach to force it up again.

LXXXIII. I know that for the prevention of Diseases, whether the upper or the lower Parts of the Body be in danger of them, Hippocrates did so abstain from Purging by Stool, that I know not that he ever purged any that way for prevention, but al-

ways by Vomit, as sufficiently appears 1. de insomniis & 3. de dieta, where he treats of the prevention of Diseases: Contrary to the custom of our Moderns who make all their preservative Purgations downwards.

LXXXIV. Nothing is more pernicious in Chronical Disempers than to macerate the Body with many solutives: which though they may seem to benefit at the first, yet in time they destroy, cast down the strength of the Members, especially of the natural, like as Snow when it falls upon standing-Corn, helps somewhat, but at length destroys it wholly.

LXXXV. After all Purgation Aetius bids us give two Drachms of the seed of Mallows finely powdered, to moisten the dried Belly.

LXXXVI. When you would Purge a melancholick Person, add Looseners, otherwise you will miss of your purpose; if a phlegmatick Person, then things that are pungent.

LXXXVII. If a Purge work not in four or five hours, advise stirring about: if there be no Fever, give two or three Pills of Aloes, salt Broth, half an Ounce of white Tartar finely Powdered in Broth, or a common Clyster. Gal. & Paulus give Adstringents.

LXXXVIII. Galen (lib. de cur. rat. per sang. miss. c. 7.) lays down a fourfold difference of healthful Persons that have need to be purged in their health for prevention. The first are those whom for some years by-past some Disease has invaded by intervals, as the Gout, Falling-sickness, Palsie, Stone, Hypochondriack melancholy, &c. The second are those who have been afflicted with some great and fearful Distemper, (as the French Pox, an inveterate Itch or Scab, the Leprosie, Scurvy) which yet was not confirmed by reason of the cure that was used. The third sort have neither been afflicted with any Disease often, nor with any that has been great and incurable, yet are disposed to a Disease by some habit that they have hereditarily contracted: for instance, the seeds of the Gout, Phthisick, Falling-sickness, Stone, &c. or the very structure of their Body, or the strong intemperature of some Part hath made them liable and easily subject to Diseases. In the fourth rank of healthful Persons are those comprehended who have some usual evacuation stopped, as of the Terms, Hemorrhoids, or of some inveterate Ulcer; or a wonted flux is stayed, or some considerable Member is cut off. Which four sorts of Men, if they will consult for their safety and life; while they are yet in health, they must prevent impending Diseases, yet tarrying for some symptom of plenitude or sickness.

LXXXIX. Hippocrates (1. de vet. Medic.) bids the Physician to consider long and round Bellies; because by looking upon them it is easie to understand who are able to endure strong Purgations: For those whose Parts contained in the Abdomen are strong and well constituted, may be safely Purged; but on the contrary those that are slender and lean, cannot be strongly purged without danger.

XC. Let not compound Purgers receive into them Medicines that are of too thin parts, as Camphor, for they carry to the Heart and to the most secret parts of the Stomach the purging Medicine which is under the genus of poisonous things.

XCI. Hippocrates (1. de sal. dieta) says we must Vomit the six Winter months, because that Season is more Phlegmatick than the Summer, and the Diseases incident therein are about the Head and the region that is above the Midriff: But when it is Summer and hot, we must use Infusions that Purge by Stool, because that Season is estuous, and the Body cholerick, and the Loins and Knees are loaded, yea and heats arise, and there are gripings in the Belly. He is wholly of a contrary opinion 4. Aph. 4. saying that in the Summer we must Purge the upper Parts by Vomit, and in Winter the lower by Stool: and

Martian. l.
de humour
v. 10.

Montan. conf.
21.

Walens.

Riolan. En-
chir. p. 65.

Rondeletius.

and *ibid.* Aph. 6. & 7. that those who are easie to Vomit, must be Purged by vomiting, yet not in the Winter; but those that are hard, by Stool, yet hardly in the Summer. *Galen* (*l. de sal. dieta com.* 15.) decides this difficulty, saying, When therefore Phlegm is generated in the Stomach in Winter, he advises us to purge Phlegm by vomiting; and when choler floats in it in the Summer, to draw it downwards: But if you intend to purge all the Body, you shall purge upwards in Summer and downwards in Winter, as is rehearsed in the Aphorism: For those who abound with Humours at present, are to be cured by Purging; yet so as that you purge by that way whither the Humours tend: but if you would hinder the increase of Humours, you ought to withdraw them by that way that is contrary to their natural tendency.

Mercat. de
ind. med. l. 1.
c. 9.

XCII. As much as may be, and the nature of the Disease will bear, use simple Purges: for besides that Nature dispenses not so well with compound Medicines, it is clear to all, that they often rather hurt than help: both because from all of them there neither always results one only form, that may act; nor can the Simples through confusion and repugnance of contraries always exert their virtues: whereby it comes to pass that they move, vex and irritate the Body, and either move those Humours that are faultless, or do not expel those that offend.

idem l. 1. c. 8.

XCIII. Note that there is a twofold Treacle, that which is but newly made, and that which is some years old, which hath undergone a due fermentation. The former has a Narcotick faculty, and may be given after a purging Medicine, when there is an over-great solution of the Belly, inasmuch as it alters that hot complexion thereof that is brought upon it by the Medicine; thickens the thin Humours; constipates the loosened Parts and makes them almost insensible. The latter is not convenient after a Purge, because it would more resolve the strength of the Body, would agitate the Humours more, would inflame more, and hinder the motion towards the lower Parts, in regard it moves the resolved matter to the skin.

Hort. concil.
iat. Enocl.
diff. 127.

XCIV. For the more delicate the Moderns have invented Clarified potions, that resemble the form of a Julep, and are not ungrateful to the taste. A double quantity of the Purgers is prescribed in them, because by the clarifying a great deal of their virtue is lost. Of these take this for an example: Take of Senna cleansed an Ounce, of Aniseeds a Drachm, of the leaves of Succory and Maiden-hair of each an handful, of Lykryrize sliced half an Ounce, boil them to ten Ounces. In the strained Liquor infuse of the best Rhubarb two Drachms, of Cassia newly drawn and Cathol. Dupl. of each an Ounce, of Tamarinds bruised half an Ounce, of Coriander seed a Drachm, of the Syrup of Roses an Ounce. Let them be strained and clarified according to Art, and make a Potion. Refer hither the Golden Syrup that is much used at this day, and is very grateful, made of the infusion of Senna, with the juice of Lemons, the cream of Tartar and Manna dissolved in it, and clarified with the white of an Egg.

River. l. 1.
c. 1. Pract.

XCv. Pills work more easily, as to the habit of the Body, in the fat, juicy well set and fleshy, because they are moister. But on the contrary, in general, whosoever have Guts that are more dry, Pills do not so well with them, because they need resolution.

Wedel. de
m. comp. ext.
p. 117.

XCVI. To bring out a viscus and acrimonious Humour, I prefer Pills prepared of Gums before all other, seeing these do both dissolve glutinous Humours, and dispose them to come forth the more easily. As for example: Take of Galbanum dissolved in vinegar of Squills and thickned again half a Drachm, of vitriolum Martis calcined to whiteness a scruple, of Trochisc. Alhandal half a Drachm, of Diagridium fifteen Grains, of the Oil of Caraway six drops, mix them, and make twenty five Pills and gild them. Take five or seven

of these in the morning on an empty Stomach, drinking some Broth or Gruel half an hour after.

Sylv. de le
Boc. Prax. l.
1. c. 35. §. 16.

XCvII. I purposely omit Aloes in many Pills that I prescribe, because it uses with trouble, and sometimes with hurt, to open the Hemorrhoids in many. Let the following Hydragogues be for instance: Take of Gum Sagapenum dissolved in vinegar and thickned again half a Drachm, of the Resin of Jalap a Scruple, of the Magisterie of Gummi Gotte half a Scruple, of the Oil of Juniper-berries three Drops, mix them, and make fifteen Pills. Let the Patient take five, more or fewer, as he is easier or harder to work upon.

Idem Prax.
l. 1. c. 35.

XCvIII. I admit of no determination of action in Purgation, nor do I grant any Election. Consult the most experienced Practical Physicians, inquire of the Sick and those that wait upon them, and all of them will say with one mouth, that always watry, thin and fluxile Excrements are first evacuated; next the Phlegmatick, and lastly the thicker, whether yellow or green, are brought forth by every Medicine. Moreover, which is more, if you go unto the Apothecaries Shops themselves, and there examine the forms prescribed by Physicians, you will often see that the most celebrated Physicians have used one and the same Medicine in purging many and divers Patients.

XCIX. Yet from hence it follows not, that any Purge may be used indifferently in any Distemper. For the Humours that require to be moistened, must have moistening Purgers, as the Syrup of Roses solutive, the Syrup of Senna, many sorts of infusions of Violets, &c. Those which are thick and ought to be incided, require Jalap, white Mechoacan, Scammony, &c. Nor matters it that Rhubarb evacuates yellow bilious Excrements, Emetics Martis aperitious blackish melancholick, and also that Flowers of Antimony do tinge with a Saffron colour; for it follows not from hence that the said Purgers do electively purge such like Humours: for we must know that these colours are not naturally in the Humours, but that they proceed from the Medicines, as the Flowers of Antimony tinge the Humours by their Sulphur, Saffron and Rhubarb heighten the yellowness of the Urine: And if some things have this faculty without the Body, to bring a certain colour upon things, why may not Purgers themselves being resolved have the same effect?

Frid. Hof.
man. m. m. l.
1. c. 7.

C. The Purgative Faculty of Medicines sometimes lies hid in the resinous Part, sometimes in the Salt: Hence Rhubarb, Agarick, Jalap, Turbith are very well extracted by the Spirit of Wine, and their Extract purges very well: But if you will extract Coloquintida, whose virtue consists in a Salt, you labour to no purpose, for it operates chiefly in substance.

Walcutt
291.

CI. The plenty of Medicines has made us poor. If you examine all the Purgers that Authors have collected, many of them are to be expelled out of that order, so that we shall seem to be reduced to scantiness: For there are some of them, that either through their sluggishness, or their vehemency are not to be used at all, or very seldom and with great judgment. The sluggish are Hyssop, Turpentine, Doader of Tyme, Polypody, Lapis Armenus, Lapis Lazuli, all which are to be expunged out of the Catalogue of Purgers; nor are Turbith, Hermodactyls to be admitted; though otherwise enough famed and cryed up: The juice of Violets does nothing. The too violent are black Hellebore, for it disturbs the whole Body; you may make tryal of it, by putting a little of the root of it in an Issue. The seed of the American Ricinus, Elaterium & Gummi Gotte may be used but seldom. May we not therefore at all use strong Purgers? I answer, that we may in two cases, namely in the Dropsie and Melancholy, &c.

Walcutt
met. med.
p. 47.

CII. Pur-

CII. Purgers (as I have known by long Experience) if they be mixt with aperient Medicines in a less quantity than may serve for Purging, so that the vertue of the Aperients prevail, do not at all move the Belly, yea their vertue, because it is of great activity, being turned to the passages of Sweat and Urine by the vertue of the Openers, does so increase the vertue of these latter, that both together make a most effectual Remedy, both to open, and also to provoke Sweat or Urine.

CIII. Whether may metallick Purgers be used safely enough for preservation? I like very well the desire of *Claudius Deodatus* in his *Panb. Hygiastic.* l. 3. p. 63. 6. that we would abstain from such as much as may be. For though there seem to precede a due and convenient preparation, yet it can hardly be, says he, but that some pernicious and poisonous qualities, wherewith the said Metals abound, should escape the hand of the most ingenious Chymist that prepares them, and so being taken within the Body, should, if not suddenly, yet in progress of time exert their vertue, and privily and by stealth prey upon the Nectar of our life: For, adds he, I have known but very few hitherto, that having used this sort of Purgers familiarly, have either come to a due and just old age, or have not contracted a Cachectick constitution of Body.

CIV. Vegetables need not always, like Minerals, a long preparation to open their *compages* or Body; for these often operate more strongly while the mixture is intire. For those, whose vertue consists in a subtil and volatil consistence, ought not with much labour and Chymical preparation to be reduced into Extracts, Magisteries or Quintessences, because most of them, as *Rhubarb*, *Manna*, *Cassa*, *Senna*, *Myrobalans*, &c. being reduced into Pills or Powder, or infused or boiled in a fit Liquor, do operate better and more easily; which being vexed with too much Artifice do either wholly lose their Purgative vertue, or exert it slowly and with trouble. It is usual, for drawing out the tinctures of Vegetables, to impregnate the Liquor they are infused in, with the Salts of Tartar or Wormwood, for so the infusion soon gets a deep colour. Though I do not condemn this Custom, inasmuch as the fixed Salts of Herbs effervesce with the acid juices of the Stomach and Intestines; yet we may detect the deceit that lies hid therein, seeing the Salts do not draw forth that deep tincture, but only cause it to appear: for if you add the salt of Tartar to an infusion of *Rhubarb*, *Senna* or other Vegetable that is already made and strained, its tincture or colour will presently become deeper. The reason whereof is, that the Saline fixt particles being very obtuse, do stuff the pores of the liquor so as that the beams of the light as they pass through, are very much refringed: and therefore any tincture being made deeper by the salt of Tartar, becomes presently clearer and thinner by pouring in some Spirit of vitriol, whose particles are sharp-pointed, without the precipitation of any matter. Yet however some of the Cathartick vegetables are mended by Chymical preparation: for such of them out of which (being full of Salt and Sulphur) the active and benign particles may be separated from the remaining more dull and malignant, and may be reduced into resinous, or other kind of compendious Extracts, I say a dissolution and new composition of these may be undertaken, to good purpose. Therefore for the due preparation of some Catharticks, we extract the Sulphureous and some of the saline part with the Spirit of Wine, as in the resinous Magisteries of *Jalap*, *Scammony*, *Mechoacan*, &c. For some we use saline Menstruums, &c.

CV. Yet I have met with some Instances of such as having taken such Spirit by the direction of a Physician, have been very ill upon it,

undergoing notable gnawings of their Stomach and Intestines, trembling of their Limbs, weakness of the whole Body and more than a two days want of appetite: The reason whereof in my opinion is, that the Purgative parts of the Spirit have returned by way of precipitation in the Stomach or Intestines to the former habit of their resin (especially if any thing was drunk cold upon it:) and the precipitated Particles sticking in the coats of the Guts, cause griping, and a weakening of the Faculties, whence they often create Swoonings, Convulsions and Tremblings, and, unless they be abterged in due time and their fierceness be dulled, super-purgations.

CVI. There must needs be some salino-sulphureous stimulus in Purgers, that may solicit Nature to excretion: for we observe that the vertue of Purgers is obtunded by Acids; which is a manifest sign that by this means their saline and sulphureous stimuli are infringed. Thus *Hellebore*, *Cologuintida*, yea *Antimony* it self, or rather its *crocus* and glass, are corrected and mitigated by the Spirit of Vitriol, or distilled Vinegar.

CVII. There are not a few, even Practitioners, who think that purging Medicines, as often as they operate not when they are taken, hurt very much: which Opinion I now laugh at, because Experience hath taught me the contrary, &c. For Purgers, if they be given duly, that is, in convenient quantity, time and measure, will always benefit, never hurt the Sick, though they do not presently purge out any of the offending Humours, for in such case they alter and correct them, and prepare them for a kindly evacuation afterwards.

CVIII. If *Choler* abound in the Body in the Spring-time, seeing it is to be feared lest by the following heat of the Sun it be poured too plentifully out of the Gall-bladder, and many Diseases arise hence, a Prudent Physician will lessen the choler, and that chiefly by Stool, as a more accustomed way and a more easie manner; but not by Vomit, unless in those that use to vomit and do it easily, who are commonly made to vomit even by Catharticks themselves.

CIX. That *Antimonium Diaphoreticum* hath a Faculty to open Obstructions is true; but it does not this of it self, but when it is mixed with Purgers: For it is certain that *Antimonium Diaphoreticum*, being joined to other Purgers, does increase their Purgative vertue (so that a less dose of them may serve) without any griping of the Belly: As for instance, If to half a scruple of the root of *Jalap* you add three or four Grains of *Antimonium Diaphoreticum*, it will work as much as if you gave a Scruple of the Root alone.

Purgers.

Purgers.

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1. IF purging Medicines be given alone, they ought not to exceed the highest Dose: if they be given with others, if there be no fermentation, neither then is the Purger to be given beyond its highest Dose: But if there be a fermentation, we may exceed the highest Dose, because the Vertue of the Purgers is refringed by fermentation. Thus the highest Dose of *pilule fastidæ* is a Drachm and an half, wherein *Euphorbium* is given to fifteen Grains, whereas the highest Dose of it self alone ought not to exceed twelve Grains. But these Pills, unless they be fermented, are not to be given in this Dose. The *Hiera of Alexander* is compounded of Aloes, Agarick, Polypody, *Opopanax*, *Sagapenum*, *Hellebore*, *Coloquintida*, *Scammony*. But some make a doubt of *Scammony*: For *Alexander* adviseth when we give a Purge, to mix nothing with it for a *Stimulus*, such as is *Scammony*; for the Purge is rendred unprofitable by the *Scammony* or *Stimulus*: For when we would purge *Phlegm* or *Melancholy*, which matters are purged with difficulty, 'tis not beneficial that the Purge should presently be carried down into the Guts, but it is expedient that it stay a good while in the Stomach, that it may work more effectually, and its Vertue be the better distributed. I answer, If there be a fermentation, *Scammony* may be mixed with other Purgers, and so *Alexander* hath mixt it here: But if there be no fermentation of the Medicin, if it be given to purge a cold matter, then according to *Alexander*, nothing is to be mixed with it under the notion of a *Stimulus*: But if an unfermented Medicin be given to purge an Hot and Cholerick matter, we may mix something with it for a *Stimulus*; for when a Purge is hot, it is not good for it to stay long in the Stomach, but to descend presently.

II. Most of the *Arabians* affirm that Aloes opens the Orifices of the Veins: But *Dioscorides* says it has an astringent Vertue, and being drunk with cold Water restrains fluxes of Blood. *Galen*, (6. simpl.) says that it glutinates. I say that Aloes applied outwardly shuts the Orifices of the Veins, and so stops the Blood from issuing forth: But being taken inwardly, so as to penetrate into the Veins, it promotes the fluxion of the Blood: For being applied outwardly it has a condensing, astringing and glutinating Vertue; but the same taken inwardly, because it attenuates very much, makes the Blood hotter, and fuses it as it were. *Dioscorides* and *Pliny* say indeed, that being taken inwardly in drink, it stops a flux of Blood, but they speak of spitting of Blood caused by the opening of some Vein; for then it is instead of an external remedy, for being drunk it flows to the open Orifice of the Vein and shuts it, just as it does when applied outwardly to some wound. I omit Aloes on purpose in most of the Pills I prescribe, because it is wont to open the Hemorrhoids in many with trouble, and sometimes with hurt.

Fr. de la
Boc
Sylvius
Præf. l. 1.
c. 34.
Sennert.
Præf. l. 3.
p. 252.
c. 13.

III. Whether does *Aloes* purge the whole Body? *Galen* (6. *simpl.*) places it among the Medicins that evacuate the *feces* or dung: The same Person (*Lib. de Theriaca ad Pison. Cap. 4.*) says it purges the whole Body; I say, First, Being taken in a small quantity, it evacuates out of the Stomach and guts; but in a greater, it draws from the whole Body. Secondly, Seeing the Distempers of the Head and upper parts commonly arise by consent from the lower, these latter being purged, the Head and whole Body become freed from excrements.

Zacut.
Phar-
mac. C. 5.

IV. Whether is *Aloes* an enemy to the Liver? *Pliny* L. 17. C. 4. *Paulus* L. 7. C. 4. and *Mesue* say that it helps the Liver: *Avicen* 14. 3. tr. 4. affirms that it hurts it. I say, *Aloes* hurts an hot Liver. *Galen* 3. n. r. c. 2. says that even washed it is very bad for those that labour under an hot and dry intemperature without vitious humours.

Idem.

V. Whether may *Aloes* be taken presently after Meat. The Author of the Book *de simpl. med.* ascribed to *Galen*, writes thus, Some after supper swallow two or three Gr. of *Aloes*, about the bigness of a small Pease, because it helps concoction, and corrupts not the Victuals. *Pliny*, L. 27. C. 4. If the Victuals be hard to concoct, *Aloes* is taken a little space after Supper. On the contrary *Paulus*, L. 7. C. 4. & 6. forbids *Aloes* after Meat, because purgation is hindered by the Victuals, and these are moreover corrupted by it. I say, *Pliny* gives it in a very small quantity to strengthen and help concoction; and the Author of the Book *de simpl. med.* orders only two or three Grains, which quantity may strengthen the Stomach, but cannot purge: If it be taken in a large quantity, it will offend the Stomach and corrupt the Meat.

Idem.

VI. Whether does it need correction? According to *Paulus*, L. 7. C. 4. it needs no other Medicin to be mixed with it to retund its ill quality; for it is a safe Medicin, and strengthens the parts: Yet *Galen* 8. n. r. c. 2. bids us add Mastic and Cinamon. I say, there is a double quality in *Aloes*, as bitter and an astringent; this latter is grateful to the Stomach, the former offensive and overturns it, and this *Galen* tames with Mastic and Cinamon. *Wede-
delius* notes concerning it, 1. That it is better extracted, for lenifying, by watry Liquors than by Spirituous: 2. That it operates better in a lesser Dose: 3. That it is better for drinkers of Beer or Ale, than for Wine-drinkers.

Idem.

VII. *Dioscorides* and *Serapio* teach that *Aloes* is to be washed; 1. For separating the earthy and gravelly part, for curing Distempers of the Eyes. 2. To take away its purgative Vertue, and increase its astringent. 3. To intend its Purgative. But washing is improperly spoken of pure *Aloes*; and to what end is the washing it with Water, and the drying of it by the heat of the Sun to be repeated? For what Vertue can accrew to it from the Water, by which it ought to be so often dissolved and dried again, if otherwise it be pure and pellucid? If it be defiled with *Sordes* or dross, I grant it is to be dissolved and strained, that it may become clearer and purer; but that is more conveniently done by the Spirit of Wine, which withal extracts its resinous and Balsamick part, than by Water; that leaves that untought; and then it will suffice to dissolve it only once, and to thicken it after it has been dissolved: For by those repeated solutions and inspissations the *Aloes* is not made better, but is rather destroyed after the manner of all purging Vegetables. I like that way best of all, when the *Aloes* (*Socotrina*) being powder'd, there is pour'd on it by repeated turns either the Juice of Violets inspissated with the Juice of Peach flowers, or the Juice of Roses, and the Juice is permitted to be dried away by a gentle heat. Those offend more that cast away the Liquor wherein the purest part of the *Aloes* is dissolved, and call that feculent part which they keep, washed *Aloes*. 'Tis true indeed, that this purges less than

that which is not washed, namely, because the best part is separated from it, the *feces* only being left with a small quantity of *Aloes*. ¶ This is that residence which *Helmont* rejects, when he says, that, that which remains from the washing, by its sticking to the Intestins causes Gripping, and the Hemorrhoids. *Aloes* consists of a resinous part and a watry: The former is unfit for purging, but this fit. Wherefore if you desire a purging *Aloes*, letting alone the resinous part gather the watry that will dissolve in the Water, and is separated from the *feces*.

VIII. *Aloes* is friendly to the Stomachs of old Men, not only because old Men are cold (for it has a drying and heating Vertue) but also because they are very prone to breed an acid crudity, which their acid sweats and other things shew: Now bitter things do best of all correct an acid crudity, and therefore also resist putrefaction. Yet in the meantime it is not to be given rashly to those that labour under a dry intemperature without vitious Humours, and have an hot Liver; especially the resinous part extracted by the Spirit of Wine; for this has a fiery heat as it were, it attenuates and dries very much, and makes the Blood hotter, and does not only not strengthen the bowels appointed for Sanguification, but hurts them by fusing the Blood as it were, and by being opposite to their Natural Constitution, and opens the Orifices of the Veins.

IX. Turbith and Agarick require Ginger to correct them, if thick Phlegm be to be evacuated; but they refuse it, if thin Phlegm, or the excrements of other humours that flow upon the Joints, be to be attracted and averted from the Joints.

X. The Seed of *Carthamus* does not so much purge as stir up flatul.

XI. *Cassia* does not, as most have thought, therefore loosen the belly, because it is soft and slippery, but because it has a peculiar purgative faculty, whereby it withdraws both Choler and Melancholy and thick Phlegm, not only out of the Guts, but also in great plenty out of the whole lower Belly; it is therefore good for the Melancholick to use it often.

XII. Let Meat be taken presently after *Cassia*, lest it pass into nourishment. a. Berberies take away its heat b; Aniseeds its windiness c: It is offensive to the Stomach and Guts when they are amiss d: It hinders any judgment to be made of the *feces* e: It causes a nausea f: It hurts the hypochondriacal, because it is naught for the Stomach and guts: It loosens the acetabula in Women with Child: It causes a prefocation of the Womb, as does also Manna g: It debilitates the ligaments in the Gouty. In vapid Distempers its correction with Citron seeds is not to be relied upon, unless the Spec. *Diarrhodon Abbatis* be added h: It sometimes brings on a Cataphora, as do also the compositions it is received into, through the fumes wherewith it fills the head i.

XIII. Those are not to be imitated that give it in Distempers of the Kidneys, and when they are foul, or when the Bladder is inflamed; for though it be gentle, yet it is a diuretick Medicin, calling forth the humours that it draws, to the Kidneys and Bladder.

XIV. Let it not be given to those that have an ulcer in their Reins or Bladder: Yet it is good for those who are troubled with the Stone, for being used for a continuance it withdraws the focus of the Gravel. It is not lightly to be given in the Gout, for part of it passes into nourishment, and so makes the parts loose and liable to fluxions. ¶ It is very nought for those that have used too much Venery, and thereby abound with crude humours, because it is flatuous and griping. ¶ *Cassia* through laxity hurts an inflamed Stomach, for when the passages are loosen'd the humours flow thither more easily, and in the beginning Repellents are to be used.

Sennert.
in paralip.
ad instit.
C. 15.

Schrode-
rus.

Frid. Hof-
man. clav.
Schrad.
p. 634.

Walæus m.
p. 45.

Enchir.
med. praff.
p. 233.

Dom. Sa-
la.

h Prevot.
tius.

Zacut:
Pharmac.
C. 2.

Heurnius
m. m. l. 2.
c. 22.

Merc. l. de
Ind. Med.
c. 1. l. 6.

Saxon.
Prel.
Præf.
p. 2. c. 8.

Hor-

¶ *Horslius* (L. 4. Obf. 34.) observed heat of Urine to be caused by it.

XV. I would have those that betake themselves to the Practice of Physick to observe, that the Physicians that undertake to practise Physick all over France (yea and the Dutch Netherlands) get abundance of Money by those Remedies that draw forth diverse humours by one Channel, which they use to the benefit of their Patients for the most part, and therefore their whole art almost consists therein. Wherefore I advise every one to endeavour earnestly to have in readines choice Medicins that are notably endued with this faculty.

XVI. *Coloquintida* purges strongly, especially the Brain; but its Operation is violent, and it is very offensive for its great bitterness: Both these faults are corrected by infusing it in Urine; for by that means it both loses its bitterness, becoming almost insipid, and also its violence is so much broken, that it may be safely given to a Drachm: and so it becomes an excellent remedy for all Diseases of the Head arising from a cold cause.

XVII. Elder, Dwarf-elder, and Flower-de-luce, are to be excluded out of the List of Purgers; for though they do not purge much, yet that which they do evacuate, they do it with very great violence.

XVIII. Always when Hellebore is given in a small quantity, we must add to it *Diagridium* or some other strong Medicin that may drive it forth of the Body, otherwise it will stay too long therein, and cause great disturbance and prejudice.

XIX. Black Hellebore is innocent: It is good for Quartan Agues, and for all stubborn Melancholick and Phlegmatick Diseases: A learned Physician gave half an Ounce of it for a Quartan, and cured his Patient thereby; having first given one and two Drachms in vain and without purging: It is given in Hydromel or Mead; or in a Decoction of Polypody, with the Seeds of Anise and Cummin, and Lykorrhize.

XX. *Fernelius* describes an Ointment, that being daubed on the Belly purges violently; but you can hardly make Tryal of it, or the like without Censure and loss of Reputation: For the Purgative Virtue insinuating it self into the Muscles and Membranes often causes a deadly flux of the Belly.

XXI. Whether are Purgers to be given in Substance, or in the Extract? Seeing there is but one part of purging Medicins, that purges, and every Particle thereof has not that Virtue in it, it is very advisable, by Chymistry to separate the profitable part from the unprofitable, the pure from the impure, and to extract the purgative part by some convenient Liquor; for that part that remains unextracted, will not purge at all, though you give three or four Ounces of it, excepting only *Coloquintida*. A Decoction works less than an Infusion; an Extract more; for in an Extract there is nothing but the resinous purging part, but in an Infusion there is still a good deal of the Liquor: This you may experiment by pouring cold Water into an Infusion, for the resinous Substance will be precipitated, and a Liquor of no efficacy will swim over it. ¶ Note, that in Extracts there is need of a segregative and a dissolutive. Lately there was given to a Woman in Child-bed a Drachm of the Rosin of Scammony without purging. ¶ In making of purging Potions we had need take heed, that we mix not such things as heat and dry much with a few Purgers, for whilst they purge but slightly, there will be danger through the Subtily of the remedy, lest the humours, being agitated and attenuated, be imbibed by the Noble parts, and sliding throughly into them obstruct the more obstinately.

XXII. Amongst Medicins purely Chymical, Luna or Silver is deservedly commended, being dissolved by the Spirit of Nitre, and then brought into Crystals: It is a powerful Hydragogue and an excellent Melanagogue. The Dose is to Four,

Five or Six Grains. It is best taken in the form of Pills, seeing it is very bitter. It is commended not only in the Dropfie, but also very much in all Melancholick Distempers.

XXIII. *Actius* greatly cries up the *Hiera* of *Rufus*, for he affirms that it evacuates naughty matters only, without touching the good; that it strengthens the Stomach, creates an Appetite, and dissolves Wind. But that I may deliver my Opinion, the use of the great *Hiera*'s seems unsafe to me; and I affirm this both from Experience and Reason: From Experience; for when I saw them given in Italy, by Physicians that were otherwise Learned, I never knew it done without prejudice and trepidation; for they bred very grievous Symptoms: From Reason; for there enters into their composition *Coloquintida* not duly prepared, and whose quality is not rendered mild enough by the addition of the aromata (or Spices:) Therefore I would rather advise to use *Trochisc. Albandal* in its stead.

XXIV. *Hydragogue* Medicins are almost infinite, and full of danger, for by a certain Natural filthiness they are adverse to the Liver, and Principal parts: And therefore they are never given to the benefit of the Patient, unless such things be mixed with them as may wash away that filthy injury, and add strength to the Noble Viscera: For the Liver generally languishes when it is moisten'd with an incursion of Water. Wherefore Reason persuadeth, and experience teacheth, that they are to be given with *Mesue's* Syrup of *Eupatorium*, or *Agrimony*, &c. Those that are more gentle, may be given to soft Men, and sometimes to Women with Child, but not rashly: The stronger are neither to be given to Children, nor to old Men, nor to Women with Child, for they provoke the Terms, and very often precipitate the fetus. Nor are they to be prescribed to the wasted or cholerick, nor to those sick of a Fever, or an acute Disease; nor are they good in very hot weather: For these should be set apart for strong Men, that have been long held with cold diseases, and that when the Weather is temperate and cool.

XXV. *Jalap* is to be accounted to be very like to *Scammony*, or is very resinous like it, so that those cautions which **Hofman* will have to be observed in the use of *Scammony*, are by no means to be neglected by young Practitioners. He says, 1. Let not *Scammoniate* Medicins be given to those whose Stomach (I comprehend the Intestins) is weak, such as are commonly the Hypochondriack. 2. Nor to the hot, and such as are prone to Fevers, for it very much disturbs their Bodies. 3. Nor in particular to those that are apt to swooning, perhaps by reason of the Mouth of the Stomach. 4. Nor let it be given in Substance in Broth. Yea, I remember, that it has often happen'd to some Individuals, that a Scruple of *Jalap* or but six or Seven Grains of its Rosin have caused a Superpurgation. At *Copenhagen*, there is to be sold in the Shops *Spec. Diagalape*, which other Practitioners commend to their Patients daily with good success; and yet that excellent Person N. used this Medicin unhappily, which had been approved of for so many years. So true is it, what *Hofman* very well observes †, That all Medicins do not presently betray their Malice: For *Cantharides* (for instance) do at length put forth their exulcerating faculty in the Kidneys. So though *Scammony* (I add *Jalap*) do not very much offend the Throat or Palat, yet it offends the Stomach, Liver, and other inner parts. Indeed it has some thin and fiery parts, some earthy adust (which I use to call Sulphureous and Saline:) and by these latter it absterges indeed, but by the former it very powerfully dissolveth, opens, attenuates and attracts. Thus *Sennertus** declares, that neither *Rhubarb*, nor the Leaves of *Senna*, nor *Scammony* or other Purgers are so apt to make the Hemorrhoids flow, in those that are disposed to them as *Aloes*, that is, the

Sylv. de 1.
loc. m. 70.
l. 2. c. 9.
§. 20.

Heurn. de
morb. c. 15.

Heurn.
meth. l. 2.
c. 26.

* 1. de Me-
dic.
Offic. c. 34.

† Obf. §. de
Medic.
Offic. c. 34.

* In para-
lip. ad in-
sit.

the malice of Aloes first betrays it self in the *Anus*, or freight Gut. So I have been taught by *Fabritius*, that the use of *Crocus metallicum* is to be avoided by old Men, and such as are subject to the falling out of the *Anus*, because it is injurious to the Sphincter thereof. Jalap therefore is not so gentle, as many persuade themselves. And I am more and more confirmed in the Opinion that Jalap and Scammony are of the same nature and temperature, which (*Scammony*) *Mesue* says indeed is hot and dry in the third degree, but *Tabernemont*, after *Dodonæus*, hath determin'd, it ought to be ranked with the moderately hot and dry: Therefore we must by no means subscribe to those that write that Jalap is hot and dry in the Fourth Degree. Yet I deny not, but that the resinous juice of Jalap newly prest out, and as yet not thickned by art, is far hotter and more acrimonious than the Roots of Jalap cut into slices and dried, which purge out serous humours by their whole substance, not as they are hot. Thus the expressed juice of our Country Flower-de-luce is very acrimonious, and burns the Throat as it were of hydropical Persons, which thing is not observed even in the *Florentine* Flower-de-luce dried. Hence *Hofman* * teaches that fresh Flower-de-luce is hot and dry in the Fourth Degree, but that being dried it stays at the First Degree, or however does not ascend above the Second; though others declare it to be hot and dry in the Third Degree. What is therefore taught of the hotness of Jalap, is to be understood of the fresh, and in its native Soil, and not of the dried.

* 1. De
Med. Offic.
c. 20.

XXVI. It ought not to be given when the humours are in motion, for then even a Grain or two will cause a superpurgation, as if one had taken too large a Dose: So a Merchant of *Lipsick* died of such a superpurgation, that had taken a Drachm of Jalap. But yet there is not always the same danger, for I myself have been very well purged by the same Dose in a turgency of the *Serum*, from a suddain impetus whereof my Face had swelled wonderfully, which fell again quite in an hours time: Yet it should rather be used for a *Stimulus*, and especially its rosin.

Amman.
Med. Crit.
p. 49.

XXVII. But if any should ask me, whether I thought Jalap or Scammony safer, I should say that Jalap were; because that Scammony which is fetched from *Antioch*, the famous Mart of *Syria*, and from *Asia*, and is brought to us, is for the most part (as *Dioscorides* testifieth, *L. 4. C. 17.*) adulterated with the Juice of *Tithymalus* or Wolfs Milk, or however is not gathered after one manner, whence 'tis no wonder that it evacuates Cholera and Phlegm sometimes most enormously, and sometimes very gently and without torment. On the contrary the solid, dried and resinous roots of Jalap are imported hither from *America*, of which (adulterated by no tricks) we artificially prepare a Magistery or Rosin. I use to infuse it for a Night upon hot Ashes from half to a whole Scruple in a Spoonful or two of Cinamon Water, and without straining to dilute it in a draught of Pilsen (or Cream of Barley) prepared without Milk.

S. Pauli
Quadrup.
Botan.
p. 473.

XXVIII. If any would prescribe the Rosin of Jalap in liquid purging mixtures, let him order it to be stamped a little with the Oil of sweet Almonds, for otherwise such mixtures will work little or nothing, and they will rather stick to the Stomach and Intestins by their clamminess, which will cause Gripping and Colick pains. Otherwise it is found by frequent experience, says *Rolfincius*, *Diff. 1. Cap. 2. Of Tartar*, that a Scruple of the best resinous Jalap has by loosening the Belly very happily cured Colick pains that even threatened a Jaundise, even without premising a Clyster, which also does not always do its Office when plentiful faeces possess the beginning of the Colon on the right side near the right Kidney.

Th. Barthol.
Cent.
5. Hb. 69.

Fr. Hofman.
m. m.
l. 1. c. 8.

XXIX. 'Tis most common to use the root of Jalap in the form of a decoction or infusion: But

seeing its Vertue is lodged in its rosin, and its appropriate *Menstruum* is neither Wine nor Water, but only Spirit of Wine, therefore it may be with Reason doubted, whether such decoctions and infusions receive the Vertue from these Roots. Some think that it will help, if the Jalap being bruised be first steeped in the Spirit of Wine, for so its Tincture being drawn is mixed with other Liquors with good success. Moreover the purgative Vertue, that is lodged chiefly in the Rosin, is communicated to Wine and Beer after digestion: Experience witnesseth that these Liquors purge; therefore we need not proceed so strictly, but may use it sometimes in decoctions and infusions, when there is an indication for purging a Phlegmatick and Serous humour.

Rolfinc.
meth. gen.
p. 507.

XXX. Some put *Lapis Lazuli* in the List of Poisons. The Greeks attribute to it a Vertue to gnaw moderately, to deterge crusts and to exulcerate: Whom *Mesue* following says it has a Vertue to burn, ulcerate and putrefie. *Fuchsius* (in *parad.*) thinks that none of the ancient Greeks gave it for purging black Cholera, as not being to be taken without great hurt. But verily it ought not to be numbred simply among Poisons, but only amongst the stronger Purgers that want not all Malignity, and it has been successfully used by the *Arabians* and *Moderns* in the cure of Diseases arising from black Cholera. Yea *Mesue* attributed to it moreover a Vertue to comfort, exhilarate and preserve youth; upon which account the *Arabians* have receiv'd it into conf. *Alkermes*.

Holler. de
morb. int.
c. 41.

XXXI. *Manna*, because of its plenty of *Flatus*, and because it is apt to turn into Cholera, cannot be given safely to the Choleric, and to those whose Inwards are much burned.

XXXII. Now I would give it in the evening, for it works better then, as the manner is at *Rome*, where they give it at Night to chuse, and they find that it operates more happily, but presently before Meal: It is given from an Ounce and an half, to two Ounces.

Montan.
consult. 43.

XXXIII. Though *Manna* evacuate thin humours, yet we must not abstain from it when the humours are prepared, that are in the *Mesaraick* Veins, especially in a Catarrh joined with a fever. I have often seen that *Manna*, though it evacuate thin humours, does open obstructions, and a preparation being made, I have seen a crisis effected.

XXXIV. Let not *Manna* be given crude, but boiled, because it abounds with *Flatus*; and with acrimonious things, as Thyme and Hyssop, that its action may be the quicker. ¶ Let it not be given alone in hot Diseases, Natures or Seasons, but either with Whey, or some cooling Liquor. ¶ If thick humours be to be evacuated, let the Cream of Tartar, or Oxymel simple be added. ¶ Be not over long in eating after it, for otherwise it is rendred ineffectual, because it turns to nourishment.

Hofman.

Claudius.

Capivac.
Montan.

XXXV. *Mechoacan* is a Divine Medicin in spurious, compound, erratick Fevers: it purges bilious humours both thin and thick, and also thin and thick Phlegm; it expells putrid humours, resolves and dissolveth *Flatus*; cleanseth the Liver, by opening Obstructions, and greatly strengthening. It cures Obstructions, and all Diseases arising therefrom: It is good for Diseases of the Kidneys from thick humours; of the Womb from thick *Flatus*; for all difficulty of Breathing; for pains of the Guts and Stomach, greatly strengthening and heating the Stomach: It cleanseth the Brain and Nerves; is excellent for the Gout, and other pains of the Joints. Lastly, All those Vertues are found in it, that are found in *Agarick* and *Rhubarb* mixt together, before which it is to be preferred. But 'tis requisite this Root be fresh, not woody or rotten, lest it perform not what is expected. ¶ It is given in Beer, or is mixed with Conserves, or also

Gabelcho-
ver. cen. 1.
c. 13.

also solutive Electuaries: Pills are likewise made of it: It exerts little or nothing of its Vertue in Infusion: And we must take heed, that we drink no Wine at Dinner, for that not only slackens and dulls its Faculties, but also wholly hinders and destroys them. Therefore when it makes one faint by purging too much, give a draught of Wine or a Toast steeped in Wine.

Abr. Seiler
in Epist.
Scheltz. 9.

XXXVI. *Mercurius dulcis*, or the *Panchymag*, of *Quercetani*, being fortified with *Mercurius Vita*, is as Two Grains of this latter be added to Seventeen of the former, is a very good Cathartick. But note that this mixture is to be ground diligently on a Marble for some hours, for by that means the Vomitive Vertue of the *Merc. Vita* is dulled, and with the *Merc. dulcis* it purges only gently by Stool.

Hartman.
prax. l. 1.
cap. 4. §. 1.

XXXVII. A Child of two years old, having contracted the Pox from its Nurse, was cured by *Merc. dulcis* taken to Eight Grains, when a Decoction of *Guaiacum* had been used to no purpose: With these Eight Grains, there were mixed four of *Diagridium*, and he took it every Fourth Day. ¶ *Formius* reports that another Child who was born pox'd, when it was fifteen days old, took two or three Grains of *Merc. dulc.* in Sugar and Milk, continuing it for a Month, by which it was cured. ¶ Yet I will not pass by in silence, that by its use the straight Gut sometimes falls down in old Men; for whom, seeing they abound in Phlegmatick humours, perhaps any Mercurials are not so convenient and safe. ¶ If Mercury be given for a Purger, it causes stools that are betwixt a Skie colour and a Green.

River.
cent. 1. obs.
95.

I. Rhod.
cent. 3. obs.
84. Sam.
Clossæus
apud Horst.
tom. 2. p.
545.

XXXVIII. Of Chymical Medicines that purge Phlegm, I commend all those prepared of Mercury both by Sublimation and Precipitation, some whereof use to be given in a larger, others in a smaller Dose. For of the Sublimates that which is called *Corrosive* is seldom given to one Grain, but the *Dulcis* may be given even to Thirty: And the Precipitates, the more they are fixed with an acid Spirit, &c. in a long and strong Fire, in the greater quantity may they be taken; but the less fixed, in the less. *Mercury Sublimatus*, that is called *Corrosive*, differs from the *Dulcis* (or sweet) in this, that being very acrimonious and corroding, there is new crude Mercury added to it, with which it is ground, and Sublimed again; in which new Sublimation, by the fresh Mercury that is added to it the acid Spirit that was in the former, is infringed, and that so, as that all its acrimony seems to be obliterated, and it is therefore called *dulcis*. Whence it is clear that all that great gnawing Vertue and Acrimony of the corrosive Mercury depends not on the Mercury it self, but on the acid Spirit that is plentifully concentrated in it, and is driven upwards and sublimed with it: For there is not only more Mercury in the sweet than in the corrosive; but moreover, not only two or three times, but even thirty times more of the former than the latter, and yet the latter is more safely used. Whence also it appears, that the noxious quality of corrosive sublimates is not to be ascribed to the Mercury it self, but to the acid Spirit that is concentrated in it in great plenty, and continues in its acrimony; seeing when it is made sweet by the addition of new Mercury and subliming it again, it then becomes at least thirty times a more gentle Medicine. How to

Sylv. de le
Boc appen-
dic. tract.
vi. §. 210.

dulcify Mercury without the addition of fresh Mercury, See Sylvius as quoted in the *Margent*, §. 215. It is strange that by a new addition of Mercury and Sublimation, so great and hurtful, so austere, burning and gnawing an Acrimony as is in the Corrosive Sublimates should be covered and hid, yea corrected: For I think there can hardly be found in Nature any austerity that can be compared with that of this. And whereas austere or sour things are generally earthy and of an obtuse taste, this Mer-

cury is withal most acrimonious, and consuming almost all things; which therefore I had rather Physicians would abstain from, than use frequently, if they would be very careful of the health of their Patients.

Idem meth.
med. lib. 2.
cap. 5. §.
26.

XXXIX. Note that *Merc. dulcis* sublimated given to Sixteen Grains, purges more in a Body that is full of bad humours, than Thirty will do in another that is not so full. In the giving of Mercury howsoever prepared we must note, 1. That Pills are the most convenient form of giving it; namely, lest the Mercury by too long stay in the Mouth should offend the Palat, causing a Flux, and making the Tonils swell, the thinner humours being drawn from every where to the Palat by a certain proper familiarity of Nature. 2. When you go about to incorporate Mercury, think it always advisable to add a drop or two of the Oil of Sulphur, for this does bridle its malignity, and fastens its volatility that tends upwards; and corrects the Symptoms that it causeth. 3. Note, that after having taken Mercury, some Gruel or Broth is to be taken within two hours at the most, and some Meat within half an hour after that, that it may not stay too long in the Stomach. 4. Let it not be given often or much to the Bilious, because by purging forth the Serous humour, which is the Bridle of Choler, it may do them harm. 5. Let it be given with Turpentine, or the following Extract of *Coloquintida*. Take of *Coloquintida* that has been kept for some years, (without its inner Husks and Kernels) half a Pound, of pure Scammony four Ounces: Slice them, and draw a tincture from them with unrectified Spirit of Wine: Throwing away the feces put the tinctured Menstruum in a Cucurbit, and in Balneo Mariæ, let the Spirit of Wine be extracted to the consistence of Honey or Pills. ¶ *Merc. dulcis* is 1. Not to be given but in Pills, or in a Bolus, never in powder, because it is an Enemy to the Teeth and Gums. 2. Let it be given well prepared, I mean not, over often rectified, but yet choice and well washed. 3. It is given in impurities of the Blood, Scab, Pox, Itch and other Ulcers; 4. In serous Distempers, as the Dropsie, for all Mercurials make the Serum very fluxile, and hinder its coagulation above all other things, and melt the Phlegm, whence also *Pilule Quercetani* deserve Praise; 5. In fluxes of the Seed, or in a simple and virulent *Gonorrhoea*, for the same Reason amongst other things, for it breaks and cleanseth the Ulcer in the Seminal Bladders by which the malady is fed, whence also by its use the flux thereof seems to be increased. 6. It is good against Worms of all sorts.

Hartman.
prax. l. 1.
c. 4. §. 1.

Idem §. 20.
21, 22, 23.
24.

Wedel. de f.
m. fac. p.
145.

XL. *Mercurius dulcis* is esteemed by some as a Panacea or Universal remedy, but it is the most profitably used in the French Pox: Its Dose is from Fifteen Grains to Thirty. It is good to acute it with a little of Scammony prepared, *troch. Albandal* or some other purger, that it may not stay long in the Stomach or Body, and raise a Salivation and other dangerous Symptoms that use to attend Mercury, as I have known it sometimes do. And we may affirm of all Mercurial Medicines in General, that it is convenient they should be exterminated out of the Body as soon as they have performed their Operation: For experience has taught, that when they are retained, they return to their pristine Nature, and have been the Authors of the worst Symptoms.

Sennert. E.
turn to their
pristin Nature,
and have been the
pist. 28.
cent. 1.

XLI. Very many commend *Mercurius Vita* wonderfully for evacuating all vitious humours in the Stomach, and all parts of the Body upwards and downwards; and therefore they use it not only for the French Pox, but also for the Gout, Dropsie, Agues; Melancholy Madness, and very many other Diseases: Yet it is to be used warily, as are also other Mercurial Medicines, and not save when the Body abounds with many thick humours. But let it not be given in lean, cholerick, and weak

K k k k k

Bodies.

Sennert. Bodies. The Dose is from One Grain, to Four or
Cent. 1. Five. ¶ That this Pouder contains no Mercury in
Ep. 33. it is clear from hence, because this being deprived of
its Congelative Salts, resumes the former species
of Quick-silver, and is all of it collected in the
Retort: This Pouder being too fiercely Vomitive,
if it be ground with Sea-salt calcin'd and sweetned
with often washing, becomes far milder, and safe
enough.

Willis's
Phar. p. m.
66.

XLII. Mountebanks give *Mercury Precipitate* without choice, for the long continued pains of the Pox, the Dropie, Quartan, Hypochondriack Melancholy, and for cold Diseases of that kind, and that to four or six Grains, in the Yolk of an Egg, or Mithridate and Treacle: And as soon as any one has taken it, all sorts of humours from the whole circuit of the Body burst forth upwards and downwards, often with so great violence, especially if the Body be weak, that the Patients Spirits being exhausted and his faculties enfeebled, he either dies suddenly, or on the Day he takes it, being without strength, without Pulse, without Voice he lies like one dead. His Mouth is sometimes inflam'd by the contagion; and his Gums contract putrid and very stinking Ulcers, and in the most the throat becomes so swell'd, that for many days they can swallow nothing at all: Yea, and in some the Mind is so alienated, that a Fever arising, they die at length frantick. Therefore let it be rejected out of the List of Catharticks as a most ready Poison, and be banished by publick Laws.

Palmar.
de morb.
contag.

XLIII. *Myrobalans* should never be mixed with any strong Medicin, because those violent things staying longer in the Body through the binding Vertue of the *Myrobalans*, do sometimes bring great harm upon the Body: Wherefore those Medicins ought rather to be mixed with others that purge hastily.

Rondelet.
Cap. 36.
l. 1.

XLIV. Some, that think themselves very wise, order *Myrobalans* to be rubbed with Oil of sweet Almonds, whether they be to be reduced to Pouder, or broken grossly for Decoctions. But indeed they do ill that chafe those *Myrobalans* with Oil that are designed for decoction, for the Oil hinders at least the Water that is poured upon the *Myrobalans* from insinuating it self into them, and passing through their substance.

Zwelfer.
Phar. m.
Class. 2.

XLV. Pills of Aloes, whether those of *Frankfort* or others, that they may operate rightly, ought to be taken in three Doses at three times; namely, the first a little before, or a little after a slight supper; the second, the next Morning; the third, the same day in the evening: Thus as I my self have experienced, and * *Horsius* witnesseth, they must needs evacuate plentifully and pleasantly, seeing one Dose drives forward another as it were.

* Tom. 2.
Obs. 12. l. 2.

Hoefer.
Herc. Med.
l. 1. c. 5.

XLVI. *Gummi Gotte* is a powerful Hydragogue, less violent than the root of *Efula* (or Spurge) *Mesereum* and *Elaterium*; it vomits also. The Dose is from two Grains, to four or six, though some imprudently give it to half a scruple. The best preparation of it is to dissolve it in rectified Spirit of Wine, and then by pouring common or Rose Water upon it, it will be precipitated to the bottom: The Pouder being of a very fine Yellow is called its Magistery; and it becomes a far more excellent Medicin than when taken crude.

Sylv. de le
Boc. m. m.
l. 2. c. 9.

XLVII. The chief use of the Salt of Tartar is in a *loosning Pilsan*, which is made of two Drachms of *Senna* infused in eight Ounces of cold Water with a Scruple or half a Scruple of the Salt of Tartar, by which the Tincture of the *Senna* is powerfully extracted; so that this Pilsan purges far more powerfully than the common.

River.
pract. l. 1.
c. 4.

XLVIII. *A. Spigelius* relates that the use of the Pouder which *Marcus Cornacchimus* has recommended in a particular Book, was prohibited at Rome

under pain of being condemned to the Gallies, because a certain Physician had formerly kill'd several with it: But because by his own experiments, especially in Tertian Agues, he had found it not only an innocent, but also a very wholesome Medicin, he thought that hardly any other cause could be imagin'd, than that that Person had not prepared his *stibium* according to Art: Namely, whilst he would make it a Diaphoretick by the Addition of Nitre, without doubt he unskillfully reduced it into a glass, whence proceeded those gripings and subversions of the Stomach, with swoonings springing from Convulsion and other lethiferous accidents: But the unhappiness of the Mistakers ought to have derogated nothing from the excellency of the Medicin. ¶ Many preparations have been invented, even in Purgers, particularly in Scammony and Jalap, the best amongst which is the Magistery made with six, eight or ten pounds of the Spirit of Wine poured upon one Pound of Scammony or Jalap, without the Addition of the Spirit of Vitriol or Salt of Tartar, which rather hinder than further the extraction of the Rosin. Indeed these very Magisteries are almost the same with Extracts, save that seeing they are more globous and plentiful, besides the extraction which is of the same Nature with Solution, by pouring even simple Water upon them, they are precipitated to the bottom, if so be the Spirit of Wine be very well rectified, for when the same is sufficiently drawn off they subside even of themselves: So that they are the more depurate part of the Purgative, or Alterative it self, and so choicer and purer than the rest. Hence we may learn what to think of sulphurated Scammony: for though 'tis to be confest that the Medicin, for whose sake it was formerly so prepared, viz. the three-headed *Cerberus* (of Scammony Sulphurated; *Antimonium Diaphoreticum*, and Cream of Tartar, mixed in a different quantity at pleasure) is excellent in Fevers and other Diseases, and that we have always experienced the use hereof to be safe; yet the sulphurated Scammony is it self far better omitted, and very profitably exchanged for its Rosin. Whereof these are the reasons; 1. Because that which is sought for, is maimed; 2. That which is not desired, is retained. The purgative Vertue is maimed, which consists in a Sulphureous Salt: Whence *Helmont* says truly, That as much of acidity as the Scammony receives, so much does it lose of its Vertue; for every acid is in it self contrary to purging (though by accident, some, especially the very sensible, are loosen'd even by acids through the acrimony that is joined with them) wherefore here can be said to be no correction, especially seeing the *fordes* or dregs, which was the argument, by this means remain, and are not separated. For he that has prepared the Rosin of Scammony, has doubtless observed gravel and terrene Bodies, which are not only unprofitable, but rather hurtful to Man's Body: Whence we have sometimes observed that terrible gripings have been caused by the giving of this Medicin (*pulvis Cornacchimus*) for how can the Body subdue and bear such Heterogeneous things?

Velfchius
Obs. 98.

G. W. We-
del. Pharm.
p. 168.

XLIX. *Rhubarb* is not found so hot with us, as the *Italians* give it out to be; perhaps the difference of the climate is the Reason. ¶ The true and intire *Rhubarb* induces violent pounding; but that which is spongy and rare, not so: For this latter being very much pounded or ground, loses its purging faculty through the vehement heat that it contracts by the agitation. Being strongly ground it becomes more powerful to bind and incrassate, for by the strong motion the fiery purgative quality exhales, and the styptick and earthy remains, which is effectual to strengthen. ¶ It needs a little correction with Cinamon, where there are obstructions, that it may the more easily

Valerius, m.
p. 46.

Zacut.
Pharma-
cop. c. 1. de
purgans.
easily

easily be dispersed into the Veins: Laven-
der Flowers are commonly added; but in those
that are apt to Vomit, or in Women with Child,
or in a febrile heat, we must abstain therefrom.
In a squalid Disease, cold and moist things must
presently be subjoined to the use of Rhubarb.

Heurn.
meth. l. 2.
c. 22.

L. *Rhubarb* purges, strengthens, and opens obstruc-
tions more in substance, than does its dilution;
and its astringent Virtue helps purgation by com-
pression: Besides, it retains the purging Virtue
longer in the Bowels, whence there is a larger ex-
purgation: Wherefore when a small Purgation is
desired, as in Children, and in such as are easily
dissipated, and weak Bodies, use the dilution (or
infusion) of it: If a stronger, use it in substance,
which will evacuate not only Choler, but Phlegm
also. Now you will find no Remedy better for
obstructions of the Liver than the substance here-
of, made up into Pills, Troches, or taken in Pou-
der, or also chewed and so swallow'd. You may
eat thus a Drachm or four Scruples with Raisins
an hour before Dinner, whereby not only is the
lax substance of the Stomach strengthen'd, but its
sides also deterg'd, and whatsoever excrement is
in it and the mesentery, gently purged out, and the
Liver freed from obstructions.

Augen. in
Epist.

LI. The purgative Virtue of *Rhubarb* is not taken
away by toasting of it; for it is more fixt than to
vanish into the Air by a slight drying of it by the
fire: If we desire its astringent Virtue, 'tis bet-
ter, after we have thrown away the first deco-
ction, to boil it again, and so to draw forth that
Virtue by a strong squeezing.

Schroder.
in Phar-
mac.

LII. How fumous *Rhubarb* is, so that it easily
affects the Head, yea induces a *Vertigo*, is clear from
this Instance: I knew a Person who by the daily
use of crude *Rhubarb*, whereof he was advis'd to
eat and swallow fasting about a Drachm without
more ado, to keep his Belly loose, that after a
while complain'd of a *Vertigo*, and that incurable,
the only and chief cause of which Malady, the
other animal Faculties being intire, I guess to be the
continual use of *Rhubarb* for some years, because, as
I said, *Rhubarb* is very fumous, which is to be af-
cribed wholly to its very Volatil Salt and Sulphur.

S. Pauli
Quadr.
Botan.
p. 455.

LIII. That is not to be pass'd by, which *Astu-
arius* hath recommended to Memory, yea, it ought
to be taken notice of by all Physicians, viz. that
Scammoniats are not to be mixed with Pottage and
Broths, for, says he, it is found by experience that
Scammony cannot be reconciled to these: Where-
fore let Physicians now a days observe, that *Scam-
moniate* Pills are not to be dissolved in Broth, and
so given to drink, seeing many have died there-
upon, as I have seen at *Venice*, and at *Ferraria* in
Sam. Abarbanel, who died upon drinking of Pills
so.

Amat. Lu-
sit. Comm.
ad Cap.
171. l. 4.

Dioscor.

LIV. *Scammony* is the soul of purgers, and the
best of all purgers, if so be it be used with Judg-
ment, because it is violent, and yet neither too hot
nor too dry. ¶ *Scammony* is best corrected by the
Electuary of the Juice of *Roses*, which I use for the
most part when there falls out a necessity of *Scam-
mony*. Let it never be given in Broth, for that
is pernicious. ¶ Those who being struck with a
vain and preposterous fear, are afraid of *Scammony*
(and *Scammoniats*) which is a very gentle and safe,
though powerful Medicin, and therefore dare not
give it to their Patients, let them use *Rhubarb*.
Scammony is prepared readily and very well, if in
a convenient Dose, (viz. Twelve or Fifteen Grains,
accordingly as one is easier or harder to purge)
it be pounded in a Mortar and a little of some
convenient Water (as of Balm, &c.) be poured
to it, and the milky Liquor that is drawn from it
by pounding, be poured off gently, and the re-
maining Virtue be likewise drawn out by pou-
ring on new Water, the black feces remaining in
the bottom: Then to the aforesaid liquor add two

Valzus.

Heurnius.

Drachms of Cinamon or Fennel Water, and like-
wise two or three Drachms of the Syrup of *Roses* so-
lutive; and so there will be made a very grateful
draught. Which that it may work the better, it will
be good about half an Hour after taking the draught
to give the Patient a Scruple or half a Drachm
of the Cream of Tartar in Broth. Very grateful
Tablets or Lozenges may also be made and pre-
served for use: Take of the Crystals of Tartar an
Ounce and an half, of *Diagridium* three Drachms, of
the Oil of Cinamon six drops, of White Sugar dissolv'd
in Rose-water Eight Ounces, mix them. These may
very conveniently be given to Children from half a
Drachm to a Drachm, to Youths to two Drachms.
¶ See the Correction of *Scammony* in *Potterius Pharm. Pract. l. 1.*
L. 1. Sect. 5. who gives it to a Scruple. *Scammony* is c. 2.
corrected divers ways, 1. In a Quince, and so it is
called *Diagridium*; but this preparation cannot be
called a true and exquisite correction of *Scammony*,
seeing the Pulp of the Quince that is added,
does only strengthen the Stomach, but not direct-
ly weaken the force and violence of the *Scammony*:
And therefore its genuin preparation is this;
2. Being finely powdered spread it thin and equally
upon brown Paper prickt full of holes, with Pins,
and let the Paper be held over the smoak of pou-
dered Sulphur: Not so as that the *Scammony* may
begin to melt, for then the smoak of the Sulphur
could not penetrate it; but rather that the *Scam-
mony* may be smoaked thereby by a slow Fire
without liquefaction: The longer this is a doing,
the better will you prepare and correct it.

Zwelf. in
Animadu.
Pharm.
Aug. p. m.
165.

LV. *Senna* is a kindly Medicin, if it be given
either in substance or infusion; but not so, if boi-
led, for then it uses to gripe. Because of these
gripings Aniseeds and other carminative Seeds use
to be added to it, yea, and the stalks to be thrown
away, seeing Wind and griping are supposed to be
chiefly caus'd by them. As far as I have been
able to observe, when a decoction is made of *Sen-
na*, its intimate Virtue seems to be drawn forth,
which evacuates not only Phlegm whether more
or less glutinous; but also sour and acid, and so
the most Melancholick humours, to which those
gripings are owing: Whence to such as abound
with sour and acid humours, *Senna* is not so pru-
dently given, unless those humours be partly at
least prepared and temper'd. And hence it is that
in some, *Senna* always causes gripings, because they
abound with sour and acid humours, which thing
happens not in others in whom Phlegmatick hu-
mours only abound, especially when the same are
less glutinous. ¶ The famous *de Mayerne* prescribed
Lavender-flowers for correction: But it is found by
experience, that the gripings are more certainly
prevented by the addition of crude Tartar, its
Cream, Crystals or its salt it self. Now gripings
and *Flatus* are owing to the nature of the humours
that are drawn forth by the *Senna*, which are thick,
tough and clammy, and have not a free passage;
yea, whilst they part from the part which they
clav'd to, they hale and pull it as I may say; yea, by
the very Carminatives that are added, new *flatus*
are rais'd which cause pain. Further we must note,
that that is true which *Schroder* says in his *Pharma-
copœia*, That *Senna* gripes because of the more crude
and earthy parts squeezed out by a strong straining
of it. A Citizen of *Neuenburg* once complain'd to
me, that a purging Potion I had prescrib'd him did
not gripe him, though he had plentiful stools,
thinking it therefore to be dull and too weak:
The next time I had occasion to purge him, re-
membering his Accusation, I prescrib'd a griping
decoction of *Senna*, upon which he sent for me to
ease his gripes: Which being over, I told him that
it was the art of a Physician to prevent such gripes,
not to raise them, which afterwards he acknow-
ledg'd from his own experience to be in his power.
Platerus* says that *Senna*, *Agarick*, and *Turkish* being

Sylv. de le
Boë m. m.
l. 2. c. 7.

* Tom. 2.
Prax.
p. 506.

in-

infused in Wine lose their griping quality: *Trincavella* says that *Senna* offends the Stomach, and therefore he corrects it with Raisins that are friendly to the Stomach, and with *Lykyrrhize* to assuage its driness. *Claudius* thinks that *Senna* when it is infused in Odoriferous Wine, needs no other Corrective.

LVI. The dose of *Senna* is from one Drachm to two; and of the Powder of *Senna* and the pulp of Prunes there is made a not ungrateful and sufficiently safe Electuary, the dose whereof may be greater or less accordingly as more or less *Senna* is added. But I cannot assent to those that think that a Scruple of it is enough to impregnate thirteen, yea twenty ounces of a convenient Liquor (as suppose some decoction) with a purgative quality; for experience shews the error of those men though never so obstinate. But on the other hand those do as imprudently, who infuse a great deal of *Senna* and *Rhubarb* in a small quantity of any Liquor, whereby often, I will not say all their virtue, but not half, nor a fourth part of it can be drawn forth. Thus fools while they shun one extremity, run into another.

LVII. I am not of their opinion who think that *Senna* disturbs and weakens the Stomach: for seeing it is dry, and has something of bitterness and astringency in it, it is manifest that it profits the Stomach. And the reason why the bodies of Women and the Phlegmatick (chiefly) are griped by an infusion of *Senna*, is to be imputed to the fault of the Phlegmatick humours, and not to the Medicin, and sometimes also it happens through the narrowness of the ways: wherefore such bodies are to be prepared. ¶ The reason why it raises griping, some will have to be from the abundance of glassy Phlegm or of an acrimonious mucilage: but those seem to think more truly, that ascribe it to the more crude and earthy particles of the *Senna* drawn forth by strong straining. ¶ Hence we observe that its extract has no such effect.

LVIII. In making the Infusion of *Roses*, we must note that it is never to be made an end of in May, and by consequence neither are the Syrup of *Roses* solutive nor the Honey thereof to be made of a new and fresh infusion, because it first stays a little, and afterwards ferments like new Wine: from whence we must observe that Physicians are by no means to use it to make either the Syrup or Honey, till the ebullition be quite ceased, which it uses to be in June; for otherwise it will be very apt to gripe, or sometimes it will so irritate Nature as to cause very plentiful and dangerous dejections, &c.

LIX. Syrup of the juice of *Roses* made by three Infusions at least and a strong expression, is good to lessen any Cacoehymy, but especially the Cholerick. *L. Septalius* * thinks that the Syrup of *Roses* solutive ought not to be reckoned amongst Lenitives, especially in Cholerick Natures and Fevers: For he has observed it, taken either alone or with Whey, to evacuate so great plenty of humours, as the Stomach and Guts could hardly receive, whence he always thought that it moved other regions of the Body besides the first: Many things happen unlookt for: It seems not to me to have done that of itself: It is sometimes adulterated by Apothecaries, (that will not take the pains to repeat the infusion oft enough) with *Diagridium*. *Rosincius* (in gen. 3. part. p. m. 462.) says in defence of *Septalius*, that the Syrup of *Roses* is an Hydragogue Medicin, which is clear by experience, especially if given alone: Now such is the Nature of Hydragogues (or Purgers of Serum) that by unlocking the mouths of the Vessels there sometimes ensues an immoderate purgation, namely from the Nature of the fluid humour, that having obtained a passage glides forth of its own accord. Whence a superpurgation has sometimes happen'd

upon the bare giving of Manna. See *Fortis* cent. 4. consil. ult. 1. tom.

LX. Some infuse an Hundred and twenty pound of *Roses* in Thirty two pound of Water, and adding Twelve pound of Sugar boil it into a Syrup: Which is a making great waste of the *Roses*, for a far less quantity will serve to make it Purgative. And if any being not so desirous of the Purgative virtue of the *Roses*, do rather by repeating so many infusions as are requisite to spend so large a quantity of *Roses*, endeavour to increase the cooling virtue, such an one certainly is much mistaken; for the oftner the *Roses* are infused, so much the bitterer will the infusion be, and bitterness is not the offspring of cold, but of heat, therefore this infusion will not cool so much. Not to mention, that it has been observed more than once, that by giving this Syrup that has been prepared of so frequent infusions, Febrile heats have not only not been diminished and allayed, but even increased, and a double Tertian made of a simple one. This happens chiefly from a large exclusion of the Serum (for this Syrup is an Hydragogue) which is a bridle to the Choler.

LXI. *Mesue* (cap. xi. simpl.) notes that *Violets* cannot endure much boiling, as if he had said that they are of thin and volatil parts. For this is to be observed, that the more fragrant any flowers or fruits are, by so much the apter generally is their fragrancy to vanish, because of the great volatility of their Sulphurs and Salts. Nor is there any reason but this, why the Syrup of *Violets* made by many infusions, being given from one Ounce to three, does more irritate the Belly, than the juice given from two Ounces to five, and is far more fragrant than that made of the juice; than which Syrup no Medicin can be devised more convenient for the Pleuritical.

LXII. I will admonish all Practitioners in Physick, that they do not, like the Vulgar, too highly commend *Worm-wood-Wine* indifferently to all persons, but only to those who labour, not of a bare intemperies of the bowels alone, but in whom these are full of slimy and cold humours. Therefore let us cease to wonder how it comes to pass that the greatest part of great drinkers, who guzzle freely every day either *Wormwood* or *Burnt-wine*, die before their time Consumptive, melting away as it were by degrees. Wherefore let *Wormwood-Wine* only gently move the belly, prepared with or without *Aloes* and *Centaury* and other Abstergers: yet you will not upon tryal find these and the like infusions made of such things to be so very safe, especially for Old men and in a dry constitution of body. Take these elegant reasons of *Hofman*, and *Galen* himself. We must be much more careful of Cautions (having spoken before of the corrections of *Aloes*, lib. 1. de med. offic. c. 3.) The greatest of these is (the same that is delivered by *Galen*. 7. m. m. XI. x. 707. 2.) Let it not be given to those who labour under a bare intemperature without matter; such need not evacuation, much less so strongly drying a Medicine, and which instead of evacuation causes a tabes: on the contrary it is given with great benefit to the cold and moist. The Second is from the same fountain, 1. de sanit. tuend. c. 11. Give it not to Old men, nor to such as are dried from any cause, unless in case of necessity: Which necessity, says *Heli-dius*, is, when humours abound. To which I object, That Old men are all of them excrementous? Therefore it is better to use others, especially such as moisten; concerning which consult *Galen* himself. The Third is from 3. aph. 15. Let not the use thereof be too frequent, nor so daily as some make it: for those are Golden words of *Galen*: The evacuation of superfluities, says he, that is made by purgers, is profitable to those that need it much, and have done so for some time; but the evacuation of those superfluities that are generated every day, deserves not so effectual a remedy.

Crato conf.
3. ap.
Scholtz. &
conf. 55.

Schrod.
pharm. c.
proprio.

Frid. Hof-
man.

Dom. Pa-
nazol. obs.
34.
Pentec. 5.

* L. 3. ani-
med. 5.
49.

S. Pauli
Quadr. Bo-
tan. class.

Simon
Pauli Qua-
dr. Bo-
tan. class.
3. m. con-
f. m.

remedy. And if any will use that evacuation twice a Month, for fear there should be heaped up a multitude of excrements; besides that it will do harm, it will also bring the Body to an ill custom. Let those hear this that use long decoctions or purging Infusions for months together: For supposing that the Body is thoroughly Purged thereby, yet the Viscera are miserably tormented. And such as value and have a care of health, will take these things as spoken to themselves: for it often happens that the unwarly destroy the causes of Life for Life's sake, that is, by the unseasonable and preposterous use of Purging and drying Medicines, do imperceptibly hasten on Old Age: For unless we grew dry, we might promise our selves a long Life. It is therefore a true saying: It is often the best remedy to use no remedies, Nature her self being the best Physician. And indeed those are the most diseased, that are ever and anon depending on the Box and Coffer of the Apothecaries. Who ever saw a Water-man, unless he were a fool, stuffing his Boat with Pitch and Tow, when it gaped not? Yet we industriously continue to corrupt our Body whilst we are in perfect health, with many Medicines, divers Pills, &c. Whereas we should not follow this custom, but for the aforesaid weighty reasons follow the course of skilful Surgeons, who know that in the curing of wounds endeavour is to be used that they be not cleansed too much, if we would heal and skin them: for if any do otherwise, together with the purulent filth he deterges the thick, clammy, glutinous Blood of the wounds, which is nearest the being converted into Flesh, and so the closing up of the wound is unwarily hindered. Those therefore who by swallowing Pills, especially those of Aloes, do every or every other day excite the small Guts above to excretion; or dilute the thick Guts below by Clysters; these verily through their unskilfulness in Anatomy, do by many harms kill many. For seeing the most perfect concoction of the natural bowels either cannot be finished without a previous and decent fermentation, (and fermentation is πνευματικός or windy, or the Chyle by means of it is said to grow spirituous;) or seeing the things to be concocted in the Stomach and Guts by secretion, are resolved also either into Spirit or Flatus, yea and skilful nature hath for this purpose annexed to the other Guts an empty sack as it were, called the blind Gut, that it might be a natural receptacle of Flatus, as the Gall bladder is of the Gall; I say seeing things are thus, a Clyster is not presently required, as soon as the Belly rumbles (which it often does without any trouble) or we perceive our Guts to be moved gently with a motion that is most natural to them, but hitherto taken for preternatural Flatus, &c. lest (to speak with Celsus) we consume in our health the remedies of sickness. It is known also, that Doctors of Anatomy teach us, that besides the proper (whether coats or) membranes, the Guts are naturally lined also with a crusty, fungous and mucous substance that the excrements may the more readily be driven down out of the Body being furthered by the slipperiness hereof: Which how profitable it is, we then come to understand, when after a long looseness, wherein this Phlegm has been expelled also, we come to want the benefit of excretion: Do not those therefore offer violence to Nature, that are daily scraping this crust from off the Guts with Pills and Clysters?

LXIII. 'Tis strange how apt Wine is to penetrate by reason of its volatil Salts, how entirely it often conveys the virtues of vegetables into the menstruum or Liquor. Hence I remember that D. Job. Michael did gravely advise, as often as Refinous Bodies were added to any Purging potion, that they were better extracted if a little Wine were added. On the same account 'tis better to use Mechoacan

in Infusion than in Powder: and Schröder (J. A. I. D. Major pharmac. § 448.) declares that the purging Spirit or *tract de* Infusion of Scammony, prepared with the Spirit of Malaga-Wine, purges without any trouble or disturbance.

LXIV. Simple Extracts are often better than compound, especially when the compound aim not all at one and the same scope. Thus the most simple Laudanum made of Opium alone, is in my opinion to be preferred far before all the Laudanums that are to be had up and down made with the essence of Spec. Diambra, &c. for these very things are far better added for the present use, according to the intention of the thing and the variation of circumstances. There is the like reason in the extraction of a mass for Pills, whence amongst other things it chiefly comes to pass, that Pills made of such a compound Mass have commonly so deceitful an effect. The same holds of most other common compositions, in which the *respects* as to the decent manner of mixture is seldom observed. 'Tis better to prepare the things which are to be prepared, and then to compound them at pleasure, or rather according to necessity, lest being overwhelmed as it were with a hodge-podge of Ingredients, we become either doubtful or deceived.

LXV. Purging extracts are a more sluggish kind of Medicine: The Resin of Scammony or Jalap may indeed be dissolved with the Spirit of Wine, and reduced into an Essence, which is a Medicine convenient enough, but yet a little too hot: But amongst Purgers Extracts are of more common use than Essences. Now that Purging Extracts are more sluggish in Operation, is clear by experience: For though half a Scruple of the Resin of Jalap, be equal in proportion to two Scruples of Jalap in substance, yet it Purges no more than one Scruple of Jalap. Yea Pills made of the Resin of Scammony or Jalap alone, have either no effect at all, or else an unfaithful one; that is, they either purge not at all, or more strongly than they should. If any ask how this comes to pass, that there should not be a stronger effect, seeing Resins and Extracts are, and are called the quintessence as it were, or at least the best part? The true reason hereof consists in the manner of resolution. Scammony, Jalap, and Rhubarb purge strongly in substance, in regard the Sulphur is more dispersed, and therefore they are more easily dissolved, and consequently stimulate the Guts to Excretion: And this very resolution of the Medicine is chiefly performed by the Serum, which as it is the vehicle of Aliments, so also of Medicines. But when the Resinous Sulphureous particles are more united, they are more conglobated and more hardly dissolved; yet when they are resolved, which they are in Bodies abounding with Salt humours chiefly, they then more readily display their Salino-Sulphureous Stimulus and communicate it to the Body. Hence Purging Resins are best given with Emulsions: And likewise it is advisable to mix the extract of Scammony or Jalap with a little of the same in substance, which we commonly do with good success. For it is to be noted that besides the Resinous, there lurk also Gummy parts in Jalap, which when precipitation is made come severally into sight by the evaporation of the decanted Liquor which is not very Purgative. Hence gather what is to be thought of that opinion of Lavaterus, who (*defens. Gal. p. 72.*) says he has been taught by experience, that the taking of a simple Infusion of Purgers does more than Extracts themselves, because he thought that the purging virtue of Medicines inheres more in the Salt than in the Sulphur or Mercury, for the Salt can never be mixed with Spirit of Wine, although in time it may draw something of a tincture from it.

LXVI. Many, imprudently enough, infuse a great deal of *Senna* and *Rhubarb* in a small quantity of *Liquor*, whereby all their virtue is so far from being drawn forth, that half or a fourth part of it is not. He therefore that is desirous to know both the quantity of the *Liquor*, and also of the *Purger* to be infused in it, 1. Let him have regard to the *Liquor* itself, whether it be pure, or imbued with the virtue of some other *Purging Medicine*, that may help or hinder the virtue of that which we are to infuse. 2. Let him consider whether the *Purger* be strong, and full of a *Purgative* virtue, or more or less destitute of the same from any cause. And seeing the *Physician* cannot know what such the *Purger* is which the *Apothecary* will make use of, the more prudent *Physicians* use to prescribe a little the more of the *Purger*, that if it have not its virtue intire, that want may be made up with using the greater quantity of it.

LXVII. But another error is often committed here by *Apothecaries*, whilst some infuse the *Purger* in the prescribed quantity of *Liquor*, others in a greater, and either take only a part thereof, or evaporate it too much; yea sometimes strain the *Purger*, and sometimes not: Whence any one may see, how uncertain the efficacy of such an *Infusion* must needs be. In the mean time many *Apothecaries* think they have *Licence* to do such things, whereby yet both the *Physicians* and *Patients* are imposed upon. Wherefore seeing it is impossible for a *Physician* to discover the particular custom of any *Apothecary*, which they often conceal, I had rather in my *Practice* prescribe either *Electuaries* or *Pills* than *Infusions*; seeing *Potions* also may be made of *Electuaries* dissolved in a convenient *Liquor*: And I have observed that I have prescribed *Physick* to my *Patients* with far greater certainty and safety than others.

Sylv. de le
Boc meth.
med. lib II.
c. 7.

Salivators.

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I. WE must suppose, 1. That this evacuation is owing to the *Serum*, whether we call it *Lympha*, or *Saliva*, or *Spittle*, or *Phlegm*, or by any other name. 2. That the glands are the receptacles of the *Serum*, or its frequent lodgings, channels and stay; and so that it is ordinarily, partly collected by this mean, and partly expelled for the uses of the *Body*; but that extraordinarily,

that is, preternaturally, it stays therein, is too plentifully collected, tends to Coagulation, and causes a tumour. 3. That in the *Lips* and *Fauces* there are not only infinite *Miliary* glands, but also many longer pores which gape into the *Mouth* partly with a Thousand holes, letting out their *Liquor*, and partly by branches or ducts, truly *Lymphatick*, but from their special use, or rather name, called *Salival*, out of which, according to the quantity of the *Lympha* it self, or its plenty and abundance, quality, thinness, fluidity or coagulation, clamminess or motion, there distills ever and anon more or less *Liquor* into the *Mouth*, which is destined to proper uses. 4. And so, that the *Mouth*, or *Palate* is an indifferent space for the reception of the *Liquor* that distills, and which it dispenses either by swallowing, and then it serves for a *Menstruum* to the *Meat*, or by spitting of it out.

Hence we say that *Salivators* do Operate both By opening the *Floud-gates*, and by dilating the *Pores*, that they may gape the more and let go from them what they retained, such as are those things that Operate partly by motion, partly by heat: Hence if one either roll a little *Pebble* only under the *Tongue*, or only move the *Tongue* it self to and again, the *Saliva* is drawn more plentifully forth, and that with a froth: Hence also in burning Fevers *Crystal* is put into the *Mouth* for asswaging thirst, as it uses by its actual coldness to allay burning and heat, that exhausts as it were all the dewy humour; which humour the *Crystal* being moved up and down in the *Mouth* draws thither. Likewise *Mastich* is very convenient for this purpose, because it both strengthens the glands, and affects the *Palate* by its grateful odour, and being in round pieces it is very fit for rolling to and again in the *Mouth*; whence we use only the granulated *Mastich* with the greatest benefit, which draws forth *Saliva* if there be occasion, to some Ounces, yea a pound in a few hours: Yea what things soever we chew, the same do also promote spitting by their motion, if there be any *Saliva* at hand.

II. Likewise by fusing, melting, and inciding the serous humours, that stagnate about the *Fauces*, so that they become apter for motion and exit, such as are hot and subtil things; whether *Saline*, as *Nitre*, *Lapis prunelle*, *Nitre Antimoniate*, and *Nitrous* things in general: For this may be observed as a rule, That all *Nitrous* things, and *Salts* also in general, make the *Serum* fluxile; whence these very things are not so convenient when the *Serum* offends in motion: Or *Sulphureous-resinous*, (mixed with *Acrimonious Volatil Saline* Particles) whether more explicit, or implicit: Whence hither belong *Tabaco*, *balsard Pellitory*, *Cubebbs*, *Lignum s.* whether in a dry form, or in a *Liquid*; *Watry*, as *Decoctions*, or *Spirituous*, as *Apoplectick waters*, for instance, in loss of *Speech*, &c. In like manner by fusing and draining the same humours in the whole *Mais* of *Blood*, and so in the whole *Body*, that they may tend towards the *Mouth* and there find an exit, such as in specie are *Mercurials* used divers ways. Indeed the manner of the Operation of these is in general the same and wholly falls in with the rest, inasmuch namely as they render the *Serum* Fluxile, and provoke it to those excretories, namely the *Fauces*: but in particular there are found in *Mercury Saline*, *Acetous* and *Sulphureous volatil* parts, which being received intimately, are actuated by the heat, and acquire a vehicle as it were in the *Serum* or *Lympha*, which therefore they more incite to motion, separate and fuse, so that by a restless motion as it were it seeks an exit for it self, and finds it chiefly in the *Fauces*, as being the most *Glandulous* parts. Hence *Mercury* purges and promotes a *Salivation* (which is as it were proper,

proper, specifick and peculiar to it self) while it is volatil, or possesses as yet a fumous Nature, but not so when fixed into a very dry Powder, because the heat whether of the Stomach, or even of the external members, if it be daubed upon them (made up into an Ointment) seems to loosen somewhat of its fumous substance, which ascending gently, in its passage provokes and calmly incites to motion the Phlegmatick humours impacted in the *Viscera*, and quietly settled there: And being once made Fluxile, their motion is furthered by the heat of the Stomach, Melaraick vessels, Liver or other *Viscera* and members, and they are expelled. Nor is this to be wondered at; for seeing by a gentle heat the same *Procreus* is willingly amalgamated, joyned and coagulated with Metals; why should it not, when communicated to our vital heat that is far more tender, and when rubbed upon our delicate Flesh, penetrate even to the Bones as it were, and insinuating it self in at the Pores, shew its efficacy very manifestly?

III. Hence Salivation by Mercury is become so famous, that being turned out as it were from the number of particular evacuators, it is advanced to the rank of universal; which may be granted so far, as the whole Body by a certain consequence deposits its ooze in these quagmires, the Glands, whence it may be called an universal Apophlegmatism: Yet it is not admitted into this rank save *secundum quid* (or in some respect) and therefore before the use and execution of this Salivation it is advisable to provide for the whole Body according as the case is, either by Purgers, or Bleeding, or which is better, by both.

IV. Now Salivators evacuate the conjunct cause, and relieve the neighbour-hood; or they are chiefly owing to those faults of the Mouth it self wherein the *Serum* re stagnates and is inclined to stay, whether in order to be heaped up, or to a slight Fluxion: Which thing happens in the tooth-ach; for which purpose Empiricks are wont to hold artificial Stones betwixt the aking Teeth: whence we may draw a corollary as it were, That Apophlegmatism and Masticatories are very good in the Tooth-ach. Likewise they are of excellent use for Scorbutical Gums and swelling Glands. So moreover, which is the other member of the Axiom, Salivators relieve the head chiefly. The former are more gentle, these stronger.

V. But they are more proper for the stagnating and rest of the plentiful *Serum*, than for its extravagant motion and deficiency. Hence they are good in all cold diseases of the head from a Phlegmatick humour, namely when the *Serum* coagulates and turns to Phlegm: But if it offend by a thin Acrimony and Fluxility, they are not so proper, especially if it be extravasated. Whence they are not good in a phthisical disposition or in the Heetick, in whom the *Serum* either fails or is infected: Nor in an *Asthma* (but with great caution) nor in spitting of Blood and Salt catarrhs falling down upon the Breast; nor in the Green-sickness, and disposition to Vomit: For as a spontaneous Salivation or spawling precedes Vomiting; so this artificial one may easily affect the Stomach, that when it is at hand it may be deduced into Act.

VI. Salivation by Mercury (*in specie*) is performed by internals and externals, and that either by one of them alone, or by both together. Mercury alone does all this, and indeed inwardly, the prepared: the more mild and frequently used is *Mercurius dulcis* to half a Scruple, or fifteen Grains, yea according to some to a Scruple or half a Drachm, given in a *Bolus* or Pills; but for a more violent and quick Salivation Red Precipitate, being freed from its too great acrimony by

washing it with Rose-water, in which case it uses to work both by Stool and Vomit at once: But outwardly this is done by *Crude Mercury* kill'd any way; but Anointing with Mercury is the most usual.

VII. Mercurials, to the end we may Salivate with them, are to be used neither in the form of Masticatories, nor of suffumigations: But in a Plaster or Girdle they are more mild. Nor in the form of Masticatories, because Mercury is an enemy to the Teeth and Bones; and so though it be a very powerful Masticatory, yet it is not safe: Whence though some make Masticatory Pills of a Scruple of *Mercurius dulcis* with a Drachm of Mastic and as much Honey as is sufficient, yet it is better not to imitate them. Nor in Suffumigation, because being resolved into vapour, it becomes more offensive to the Nerves: save that for a particular use, as for Venereal Ulcers in the Yard, Surgeons still use such Suffumigations. But Mercury is very frequently used in a Plaster, both for resolving and salivating; for Mercury does both; if it operate more mildly, it only resolves; if more strongly, it fuses and causes a salivation. *Empl. Vigonis* with Mercury is in great use for this purpose, increasing the Mercury to what quantity it pleaseth; this is much commended for *Gummata* and tumours of the Glands, and for pain, and it discuteth other hard nodes. In a Girdle it is either less or more prepared: If less, it is only kill'd with fasting Spittle and then spread upon some rough list of Cloth with some clammy substance (as the white of an Egg) to keep it on; if more, then other things are added, as they are in *Rulandus's cingulus sapientie*, which is an innocent remedy if rightly used.

VIII. The external use of Anointing, is either more universal, or determinate. Thus some command to anoint the Neck, Spine of the back, Breast, Arms, Belly, Thighs, the palms of the Hands, &c. But it is more advisable to use two places chiefly, the nape of the Neck for Plasters, and the Joints of the extreme parts for Anointings. Hence also in curing the Itch, sometimes the Wrist, the Arm-holes and Hams are profitably anointed with Mercurials. From which we further note two things, 1. That the remedies of the Itch and Pox are the same. 2. That Mercurials often do not Salivate, and yet cure the Symptoms.

IX. Mercury is a rooter up of the French Pox, and also of other Rebellious Diseases: For though it be a safer way to cure the Pox by Sweating, and more dangerous by Salivation; yet if the malady have taken deep root, it requires this latter way to root it out: So that as Noble Remedies are owing to Giant-like Diseases, so is Salivation owing principally to the Pox, both as to the whole distemper, and as to all its Symptoms as it were, pains, tumours of the Glandules, &c. But it has place also in other Diseases, as Madness, Falling-sickness, Gout, seeing it has been found by experience that some who have caught the Pox that were before all of some of the said distempers, have by one Salivation been cured of both. Yet hereby other remedies also are not excluded; only after having used Universals, Salivation is chiefly to be enjoined with Purging and Sweating. I knew a Gouty person so well cured by Anointing with Mercury, that he continued well for three Years; and though the Disease returned afterwards, yet it was far milder than before. Salivation has Wedel de place in Fevers if they be putrid, benign and *f. m. fac.* intermittent (yet *Fonseca consult.* 31. tom. 2. says p. 213. that some have cured a spotted Fever thereby.) Continual Fevers have been observed to terminate in health several times by a critical Salivation. Others have observed it to profit in a Quartan.

W.

We have seen a stubborn, refractory Head-ach cured by a light artificial Salivation. I was of opinion, that a Sympathetick *Vertigo*, caused by a consent with the Hypochondres, that had continued for a long time, returning by intervals, and yielding to no remedies, might be cured by this remedy: And upon tryal the event answer'd my opinion and desire. The Mad are cured by this means; the Melancholick disease may promise it self a cure from hence. I have Cured not one but many of the Falling-sickness this way: I only mist twice of my expectation, when the malady was hereditary and deep rooted. The Gout expects help for preservation from hence; a stubborn Itch, yea even the more gentle gives place to it: Frequent experience witnesseth, that long continuing, yea Ancient Ulcers of the Legs are cured by a prudent Anointing, and even by a light Salivation. The Spontaneous solutions of the said diseases have given occasion to think of such a remedy. ¶ In fenny *Holland* a Salivation, like a most faithful Crisis, does for the most part terminate even the most violent Fevers, namely the Flox-pox: and sometimes the most stubborn diseases of an obstructed Spleen, in whom such Salivation continues sometimes above a month. ¶ A young Man born at *Lyons*, (Monf. *Tambaras*.) about eighteen years of Age, falling into the Small-Pox at *Geneva*, 1670. happily escaped from them by a plentiful Salivation that continued for eight days.

Gul. Rol-
finc. m.
gener. p.
510.

Tulp. obs.
33. l. 3.

X. The cure by Salivation seems to offend against the Laws deliver'd by *Aesclepiades* and *Galen*; for it is neither quick, nor safe, nor pleasant: Not quick, seeing it continues above twenty days: Not safe, in respect of the matter and effect; Mercury is a dangerous Medicin, as being poisonous, as also the Medicines prepared of it; for Red Precipitate is corrosive: grievous Symptoms follow Salivations in the Mouth and *Fauces*, Erosions in the Palate, the Heart suffers Anxieties, there is sometimes so great a Flux of the Belly, that it becomes Bloody, &c. I answer, 'Tis granted that here is a failure in the shortness of the cure, but too great haste uses to be dangerous: We should not have more regard to the speediness of the cure, than to perform it as we should, without defect. There may a twofold security be assigned, one that is such simply, and another *secundum quid* (or in some respect.) In the cure of the French-Pox, and other diseases, an absolute security is not always to be lookt at, but sometime such as is joyned with danger: He that has too great regard to security, fails in the generosity of the cure: And it is a very hard thing to find a generous remedy that profits greatly and does no hurt. I grant that Mercury is a dangerous remedy in some respect, not simply: Many bear witness that it has been taken in substance crude without harm: I deny that all the preparations of it are dangerous, if they be rightly prepared. Suppose it cause grievous Symptoms, what then? An inveterate Pox cannot be rooted out with milder things, as *Guaiacum*; the *Fauces*, Palat, Gums, Stomach, Guts suffer, that the whole Body may not perish, and that other parts, of what kind soever they be, may be eased of their burden. Many diseases become incurable by accident, 1. By the fault of the Patients that will not admit of generous Remedies. 2. By the fault of the Physicians, that through fearfulness and unskillfulness do not prescribe generous Remedies. The pleasantness of the cure is sometimes to be less regarded.

XI. As a spontaneous and critical Salivation often happens to the benefit of the Sick; so it becomes a prudent Physician sometimes to attempt the like artificial one. I confess that Salivating by Mercury is often undertaken in the

cure of the French-Pox; but Salivation ought likewise to be rais'd in the cure of other obstinate diseases, as suppose of a foul Scab, and in other diseases that depend on a glutinous and acrimonious humour mixt with the Blood, and intimately received into most parts, and which have eluded the vertue of vulgar Remedies. Now Mercury is used sometimes crude, sometimes first sublimed or precipitated with Sulphur into *Cinnabar*, or with acid Salts and Spirits. Crude Mercury being first killed with Spittle or by other means is often mixed with some sort of Grease, with Butter or Ointments, and then it is anointed outwardly on the Body; whereupon after the Anointings have been repeated for some days there is rais'd a Salivation in some sooner, in others later. The safest places to Anoint are the extrem parts of the Limbs, the soles of the Feet and palms of the Hand; then the Wrists and Ankles, next the Hams and Elbows, afterwards the Groins and Arm-pits; lastly the Spine of the Back, especially about the Loins: Taking heed that neither the Head nor Breast be Anointed, seeing it has been observed that Patients have been brought into danger of their lives thereby. We must not Anoint too freely, but must take strict notice what changes happen in the Body upon it, whether disturbances of the Belly, or motions of the humours towards the *Fauces* and Mouth. The Patient must be kept in a warm Room, and have cloaths enough laid on him, so as his Body may be disposed to Sweat. For it is profitable that he should Sweat gently, for hereby all the humours and especially the Glutinous and Phlegmatick seem to be dissolved, and made apter to be wrought upon by the Mercury. Phlegmatick humours are thickened by cold and made unapt for motion; the contrary is to be expected from warmth. We must continue, according to the strength or weakness of the Patient, to Anoint every or every other day, till the Gums begin to swell, and the Jaws (or *Fauces*) to ache and burn, and the breath to stink: which is a sign that all things accommodate themselves to the following Salivation, and that it is at hand. Then we must cease from further Anointing, lest too great a Salivation follow and such as may be apt to strangle the Patient. Some use crude Mercury inwardly also for the raising a Salivation, giving daily six, eight or ten Granes of it till a Salivation be rais'd by degrees. And then we must abstain from the farther use of the Mercury, unless after two, three or four days the Salivation proceed more dully, in which case we not only may, but must give more Mercury. But when it is rais'd high enough, we must take heed of using any more, for thereby the Glutinous and offending humours might be carried in too great quantity to the Salival Ducts and Glands of the *Fauces*, and the Patient might incur danger of his life through suffocation. Certainly there is need of great discretion in the using of Mercury, seeing by it the Phlegmatick Glutinous humours and others that are mixt with the whole Mass of Blood, yea dispersed all over the Body, are wonderfully moved, and driven forwards chiefly to the *Fauces*. But then crude Mercury may be killed divers ways, by Spittle, the juice of Citron, or other things; then may be made up into Pills with Agarick, Rhubarb, Aloes, Scammony, Coloquintida and other Purgers added to it, and so may be given in a small Dose every day till the Salivation shew it self at hand. Where note always that 'tis best to keep the Patient in a warm Room, yea in Bed, that he may continue in a kind of Sweat, for so the Salivation is facilitated. Salivation is not rais'd only by crude Mercury whether used outwardly or inwardly, but by the same first coagulated and prepared divers ways. Amongst the various pre-

parations

Spir. de le
Bee meth.
med. lib. 1.
c. 13. See
more
there.

idem
lib. 1.

parations of it, that is not the worst, whereby being boiled with Sulphur it is sublimed into Cinnabar, which is used by way of Suffumigation. Now the fume is received either by the whole Body, or only by the Mouth: By such fume penetrating through the Pores of the skin to the inner parts, the humours wheresoever existing, (Phlegmatick, Glutinous and Acrimonious) are dissolved by little and little, and brought to a Flux, and are directed by degrees to the Salival glands of the Mouth, upon which a Salivation follows, which is caused more happily this way when there are Ulcers in the external parts, which grant a more open passage to the fume and by it are the sooner cured. Salivation is raised by a particular fume received in at the Mouth by a funnel: Which way of using Mercury I esteem to be the safest of all, and yet nevertheless very fit for curing diseases that are not too inveterate, and so very hard to cure. For this way a moderate Salivation is raised by degrees without any danger of suffocation; for so much Saliva is drained forth at every time, as any Patient seems to be able to endure well. Yea if this way be used in Summer or other warm season, it permits the Patient to go abroad, so that none but such as are well skill'd in the matter can take any notice of it: Namely a little Cinnabar (joined with Mastic, Frankincense, Benzoin, Myrrh, Amber, Laudanum and other things) is cast upon the coals daily or every other day, then setting the wide end of a Funnel upon it, the Smoak is received into your Mouth through the small; whereby a slight Salivation is raised; which afterwards is renewed, unless it continue of its own accord. To raise a Salivation, as well Sublimate as Precipitate Mercury is used: But such precipitate must be chosen as is least fixt; for all Evacuators prepared of minerals, the more fixed they are made by their preparation, the less do they evacuate the offending humours any way; and the less fixed they are, they evacuate the same more largely and plentifully, yea and also more violently. When the same are most volatil, they expel the humours more easily by Salivation, so they be given in a very small Dose at one time. And we must take heed lest the Phlegm be hurried too fast and in too great quantity to the Salival Glands, seeing there is danger of a Suffocation from thence, whilst not only the conglomerate maxillar glands, both upper and lower, are filled and made to swell thereby, but also the whole Glandulous coat of the Mouth, Fauces and Nostrils is then filled with the same Phlegm, and being distended produces a dangerous and sometimes deadly straitness in the Fauces, that choaks Men.

XII. During the Salivation as it is hard to take food that is solid; so if it were taken, it would do harm, and instead of it 'tis more profitable and fit to use sweet Milk and Broths, as also Beer warm'd with a Toast; with the addition of a little Sugar, if it like.

Sylv. de le
Boe meth.
med. lib. 1.
c. 13. See
more
there.
Idem
Ibid.

Sanguinis missio, or Bleeding.

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M m m m m

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- I. Whether it is convenient on any account to let Blood in every Disease and Fever? Many are the benefits of Blood-letting, for which it is celebrated in every Fever, and sitting disease. Some open a Vein for this reason, that part of the aliment may be withdrawn; for then Nature is more at leisure to turn her self to the Disease, and setting upon the concoction of the Morbifick cause, in a short time conquers it: On this account fasting, and thinness of diet are so much commended. Blood is also profitably let for opening obstructions and hindring putrefaction (9. meth. 4.) Yet distinguish the cause of Obstruction; for if plenty of Blood cause it, bleeding is profitable; but if the quality of the humours, the use of attenuaters is beneficial. It is also profitable in long continued obstructions of the Liver from a matter that is thick, viscid and hard to move, because bleeding does agitate the humours, so that those which are stufft up in the Liver receive a motion, and more readily obey a purger. And though attenuation be performed by Aperients, these when they are too hot, heat violently: Wherefore that we may procure that motion to any humour that is necessary for the purging it off, it is better to use Bleeding than too hot Medicines. Blood is often let also for tryal, in which case a little only is drawn forth, that we may discover by it what humour offends, in order to purge it off. Thus in a Quartan Ague it is usually black and Thick; for if it be thin and of a bright Yellow in a Quartan, or in Melancholy, we must stop it presently. Bleeding cools also, because it draws forth an hot substance. Therefore there are several benefits from bleeding in every disease, so that there hardly seems to be any, wherein its use is not to be admitted, if not upon the account that it evacuates, yet because it diverts, cools, opens obstructions, minorates, moves, or subtracts aliment, or for tryal as aforesaid.
- II. Because Venesection is used for evacuating Blood, and Blood is profitable to Nature; it will behove us rightly to administer it, so as that it may let out what is unprofitable to Nature. Now Blood becomes unprofitable to Nature two ways; either when it does not exactly keep its proper quality, nor can nourish any longer as it did before when it was profitable; or when it hath so increased in quantity, as either to oppress the faculties, or to distend, or burst, or obstruct the Veins and Arteries. And in these truly bleeding is profitable, as one of the evacuating remedies: in others, inasmuch as it calls back the too vehement impetus of the humours to a contrary or different part, Gal. 9. or derives it sideways. ¶ If matter either be wanting, or be intire, bleeding is improper; but if it either offend in its quantity, or be corrupted, it is helped no way better. Likewise diseases of the Viscera, resolution, stiffness and distention of the Nerves; lastly, whatsoever does strangle the Throat with difficulty of breathing, or suddenly suppresses

suppresses our Voice, calls for bleeding. So does any intolerable pain, and when any thing is broken or bruised within from whatsoever cause. In like manner an ill habit of Body, and all acute diseases, that hurt not through weakness, but oppression. Yet it may so happen that the Disease may indeed require it, and the Body seem not to be able to bear it. But yet if there appear no other remedy, and the sick Person be ready to die, unless he be relieved some rash way; in this case a prudent Physician will shew how little hope there is without bleeding, and withal confess what great hazard there is in it also; and then at last, if required, to let Blood: For it is better to try a doubtful remedy than none. And that ought chiefly to be done when there is a resolution of the Nerves, when one is suddenly struck dumb, when one is strangled with a Quinsey, when the last fit of an Ague almost kill'd the Patient, and 'tis like the next will be as bad, and his strength seems unable to sustain the assault thereof.

Celsus,
l. 2. c. 10.

III. When the Blood that comes forth is greatly corrupted, 'tis a sign there is great want of good Blood: Which greatly moves our common and unlearned Physicians, and invites them to let Blood again and again more largely and profusely; but makes the skilful more wary, because such as labour under so great a *cacochymy* being once debilitated, have not where-withal to be recruited; and in the mean time they are nourished by their own Blood though bad. Being left to themselves these latter are against bleeding in such a case; and if they be over persuaded to it, they will advise to do it sparingly.

Vallef.
meth.
med. l. 2.
c. 4.

¶ Yet we sometimes observe that bleeding does good in an intire and compleat *cacochymy*: But then it must be moderate; and let it be performed by little and little at a time, repeating it often: And in the intervals use altering and strengthening Medicines, and meats of easie digestion, as we know Galen did. I knew one that was Physician to the King of France change his own ill habit of Body thus, letting himself Blood Fifteen or Twenty times in a Year. ¶ Though in bleeding when there is such a *cacochymy* of the Veins, all the humours issue forth equally, and there remain one and the same proportion of the humours; yet because when part of the load wherewith Nature was burthened is with-drawn, the faculties become never the weaker, but rather more brisk, they better bear that which remains, and more easily tame and consume it.

Walæus,
m. m.
p. 72.

Fernel. m.
m. l. 2. c. 4.

¶ I deny not but many Diseases that spring from a *cacochymy* are happily cured by Bleeding, that is, as I interpret, that it is used with profit amongst other Medical remedies. For part of the vitious humours are with-drawn by it, and so Nature is eased of part of her Burthen, so that afterwards she corrects more easily what is capable of correction, and being helped by a purging Medicine more readily expels what is fit for excretion. Now this emolument is then to be expected from Venesection, when either the *cacochymy* abounds chiefly in the outer Veins, or is equally diffused through all: For if it be in the inner, as being remote and larger, you shall indeed take nothing away from the *cacochymy* by opening a Vein, but shall however deprive Nature of her more laudable Blood: Which thing whether it will turn to the advantage of the Patient, any one understands. Moreover, if a *Cacochymy* as such does of it self indicate Venesection, then it shall be administered in all diseases that spring from a *cacochymy*: But do you open a Vein in a bilious *cacochymy*, and what disturbance you will raise, the event will teach you sufficiently. If you order the same in a Phlegmatick *cacochymy*, you shall thereby increase it the more, and shall precipitate the Body into a cachexy, and from that into a Dropsie. The rea-

son why bleeding is useful for the Mad, is because their fervid Blood is partly cooled by it, and partly hindered from rushing so impetuously into the Head. To undertake by repeated Venesection only, to bring forth those vitious humours that cannot be taken away by Purgers, I think to be full of danger: For in my opinion the Blood may be safer defecated or clarified by diureticks and hydropicks. ¶ As to bleeding in a *cacochymy*, I for my part do not defend it: Only this I would admonish you of (of which you are not ignorant) that Nature often uses to drive forth Vitious humours to the external Veins, whence by opening a Vein in Fevers a good part of the *cacochymy* is often happily taken away: As also of that which F. Platerus (Ty. 1. Pract. P. 143.) alledges, that in the Mad and Melancholick a *cacochymy* has often been taken away by repeated Venesection. ¶ I add; pray let you and me consider, Whether Practitioners oftner open a Vein in the *cacochymical* or Plethorick? I think that of ten which are Bled, you shall hardly find One Plethorick for Nine *cacochymical*: And yet these things are done daily, and that by the advice of Physicians, and not always with bad success. The reason wherof I think to be this: Nature being solicitous for Man's health, always takes care to expel from the Royal way of the Body (or Vitals) whatsoever vitious humours there are, either to the first ways (or guts) or to the Superficies of the Body, and so to keep the Noble *Viscera* safe: Hence from the expulsion of vitious humours there arise Scabs and Infinite kinds of Tumors & Tubercles. But before the Matter bursts forth in the Surface of the Body, it abides in the Veins of the Limbs: Whence when we open a Vein, often hardly the fourth part, of that which comes forth, deserves the Name of Blood. Therefore seems it not more advisable by opening a Vein to evacuate the *cacochymy* out of the Veins in the Limbs, whither it is driven forth by Nature, than by purging to recall it into the inner parts of the Body again, and to defile or taint the *Viscera* if it be not all of it evacuated? *Idem Epist. 92.*

¶ All Physicians agree that a *Plethora* or Plenitude is an excess of sincere Blood, that is, of such as is fit for the nourishment of the Body; and that a *cacochymy* is a redundance of Vitious humours, and that purging is a convenient way to expel and bring forth a vitious humour lodged in the Body: But most Physicians affirm, more importunately than truly, that a vitious humour is not to be drawn forth by such a kind of Purgation as Bleeding, but by purging by stool, by vomiting, by sweating, &c. yea, they say, that by these means, only that which is vitious and unprofitable to the Body is expelled, but by bleeding that also which is profitable is drawn forth, Nature, namely, not separating hereby the unprofitable from the profitable, but suffering whatsoever is contained in the Veins to flow out indifferently, as well the good as the bad, whence there is more harm than benefit. But if a *cacochymy* be distributed through the whole Body, as all are of Opinion, 'tis certain, that 'tis partly contained also in the Veins of the whole Body. And I pray, by what Art, or what kind of Purgation can the vitious Blood that is in the Limbs, be purged off? 'Tis weak to think it can be done by stool; and more foolish to believe it can be done by vomit, or coughing, or by Urine, though all these are sometimes profitable in Diseases of the Limbs, but that only by accident, namely, because thereby is taken away some part of the humour that might feed and increase the *cacochymy*, and consequently the said Diseases. For there is no retreat granted to the humours from the Limbs to the said Emissaries, except in deadly evacuations, as in a vehement *diabetes* almost all the Serum, and in a great looseness all the humour of the Body almost may be poured forth. Therefore seeing a *cacochymy*

M. Do-
ring.
Ep. 80.
Cent. 1.

Sennert.
Epist. 85.

Idem Epist.
92.

my lodges not in one part only of the Body, but possesses almost all of it, it is to be evacuated out of its various parts, namely out of the Veins what is contained in them; that which lies next under the skin, by scarifying, or sweating, or insensible transpiration; by Stool, what is seated in the Bowels and thereabouts; by Vomit, what is contained in the Stomach; by Urine, what in the Kidneys; by blowing the Nose or Coughing, what burthens the Head or Lungs; and in a word, from every part is its proper burthen to be unloaded; or however from that which is next to the part affected, or is most fit.

Therefore in a *Cachexy*, that is, an ill habit of the whole Body, purgation is indeed necessary, but not only that which is done by Catharticks, but rather that which we attempt by Bleeding: For that the Blood may be purged by opening a Vein, the effect it self teacheth, seeing we observe that thereby many cachectick persons have been restored to a good habit of Body from a very bad one, and have been continued therein for many Years. None was ever seen to abound with a greater and more stubborn *Colluvies* of humours than my Brother, who was freed beyond hope from a very grievous *Palsie*, and a *Convulsion* of another part, twenty four years ago; and presently after being seized on by a Malignant scab, from which he could be freed neither by Purgings, nor Baths, nor Anointings, &c. he was not only cured of his Scab by Bleeding often repeated against the advice of his Physicians, but brought to a better habit of Body than he had before. I my self also being so cachectick from a *Quartan Ague*, that I was not a little afraid of a *Dropfie*, was restored by no other remedy (though I first tried to do it by Purgings, *Apozems* and Diet) but by repeated Bleeding. My servant *Henry* escaped from a pestilential Fever by being thrice let Blood by my direction; but a languid, sweating Fever remaining, which seemed to tend to a *Leucophlegmaria*, I let him Blood four times, taking a pound each time, whereby he was recovered in about twenty days, and is now in good health, and Married. There was so great a *Colluvies* in his Blood as I never saw before, for in one (medical) pound there were at least ten ounces of *Serum*, and more than an ounce and half of thick and very tough *Phlegm* swimming a top, and about half an ounce of very black and corrupt Blood subsiding.

I have handled several in like manner, to whom many Physicians thought that Bleeding would by no means be beneficial, but Purgings, according to the common opinion that purging is owing to a *Cacochymy*, which opinion were true, if they added not, [and not Bleeding.] Yet from the Instances alledged I would not have it infer'd, that all Bodies that are Cachectick and of impure Blood, are to be so treated; for the impurity of the humours that reside in the Intestines, ought by no means to be comprehended under the name of a *Cachexy*. But as I would not that these examples and others should be esteemed as Laws; so neither is it fitting that they should be rejected as unprofitable, and estranged from art; especially seeing all art proceeds from experiments, and universals themselves are derived from particulars. Wherefore if this opinion of mine, that is said to be repugnant to *Galen*, be to be received, it ought to be confirmed and strengthened by the chief Authors of art, by *Galen* himself, *Hippocrates* and others of any note. In what I pray does *Galen* seem to contend more against *Erastistratus*, than in shewing his evil mistake that Bleeding was profitable only in a *Plethora*? He himself used this remedy in his practice; for *g.m.m.c.5. & l. 11.c.15.* he bids us cure all putrid Fevers by Bleeding, and if they be continual, as the *Synochus pu-*

trida, he bids us Bleed freely. Now it were foolish to think that in these a *Plethora* only offended. And when he said that Blood might be let even in those putrid Fevers both on the seventh day and twentieth, and later if other indications were answerable, did he think that these Bodies were *Plethorick*? Moreover did he think that Woman *Plethorick*, of whom he speaks, *6 Epid. comm. 3.* that was spent and wasted by a long Disease? And yet he says he let her Blood thrice, three days one after another, and gave her no Purgers. He hath confirmed the same by precepts; for *XI. m.m.c. 5.* says he, *If in an hot and dry constitution, with the offending of some humour, there be raised a Fever through many thick and glutinous humours, Blood is to be let; that the offending humour may the more easily transpire.* Further, *If the Body be straitned, and the little passages condensed, and withal there be many and clammy humours lurking, in such a complication of causes as this, it is convenient to begin with Bleeding.* And *9 meth. cap. 10.* he says that, *a large evacuation of Blood is dangerous if it be made altogether, the faculties being weak, with a corruption of humours, wherein, he says, when the indications are so cross to one another, we must evacuate by little and little what is vitious, and by degrees also fill up its room with that which is wholesome.* Which form of cure *Celsus* describes accurately thus (*lib.3. c.22.*) *If there be a bad habit of Body, which the Greeks call a Cachexy, we must first use a spare diet, then Purge; and if other things do no good, we must Bleed, but by little and little and daily.* And in the chapter of Blood-letting he affirms also, that it is profitable in a bad habit of Body; and he says, *In an abundance of Blood, or in the corruption of it, the sick can be relieved by no remedy better than by Bleeding, yea by Bleeding till the Blood come out pure.* Now let us hear *Rhasis*: *If Melancholy*, says he, be accompanied with a pain and inflation of the Belly, and the colour of the Body be vitiated, if there be a bad concoction, vomiting, acid belchings and plenty of flatuosities, we shall begin the cure by opening the Axillar Vein, or the Vein by the little finger in the left hand. A *Cacochymical* Body cannot be described more clearly. Who will not call *Splenetic* persons inclining to a *Dropfie*, *Cacochymical*? yet *Hippocrates lib. de affect. num. 21.* says that the *Splenetic* Vein is often to be opened in such. Therefore *Galen* did not do well to conceal Bleeding when he propounded the remedies of a *Cacochymy*, especially seeing you will hardly find any chronical disease, though very small, or any acute or new one that is great, without a *Cacochymy*. For sick bodies when they have occasion to be Physick'd abound with vitious excrements. Add, that almost all the bodies wherein *Hippocrates* commands Bleeding, are to be esteemed *Cacochymical* not *Plethorick*, as may be known by the instances. If the Blood therefore be unprofitable, as *Galen* says *9. m.m. 11.* when it keeps not its proper quality exactly, nor can any longer nourish the Body as it did before, Bleeding is not only not to be contemned in a *Cacochymy*, but to be greatly commended. But yet it is so to be divided, that by often repeating the same (as *Galen* and *Celsus* teach) that which is corrupted in the Veins may be drawn forth the greatest part of it without injuring the faculties; I say the greatest part, because it is neither convenient, nor possible to art to take away all: But the residue, as *Galen* often says, does transpire the more easily, or is expelled by the assistance of Nature. *Leon Bo-*

tallus lib. IV. Why are we so much against Bleeding in a *Phlegmatick plenitude*, if the *Phlegm* by further per *f.m. elaboration* being turned into Blood do strengthen the faculties, and supply the want of Blood? This happens on divers accounts. 1. Because seeing the mouth of the Stomach is the receptacle of *Phlegm*, the same is often likewise hurt, where-

by,

by, as also because of the vicinity of the Heart, there follows a *Syncope* or swooning, as appears in the *Syncope* Fever. 2. The coldness of the Phlegm is very adverse to Nature. 3. When Phlegm by its plenty overcometh Melancholy, it dulls, extinguishes and suffocates the innate heat: For seeing Phlegm is a crude humour; when it abounds in the Vessels, it hinders the access of the Blood to the parts to be nourished. 4. Seeing Phlegm may obstruct on three accounts, both by its quantity, thickness, and roughness or clamminess, in an obstruction arising from these causes, there is an hindrance of a sufficient transpiration of the Air to nourish the Spirits, from a defect whereof springs a weakness of the faculties.

Thom. 2.
Veiga 1.
de diff.
febr. comm.
3.

V. In a *Melancholick plenitude* we may Bleed more largely and boldly, 1. Because the Melancholick have much hot Blood, for the ventilation and evacuation whereof Bleeding is very available. 2. That humour though it be thick, yet is not clammy, which clamminess seeing Phlegm partakes of, and thickens more to the Vessels, it is not so readily brought forth with the Blood. 3. By evacuating the Blood the Melancholick humour is likewise evacuated, because it is the *flex* or dreggy part of the Blood; but so is not Phlegm, nor any other crude humour. 4. Natural Melancholy is more agreeable to the nature of the Blood than Phlegm is, seeing it is generated by a temperate heat; but so is not Phlegm, but by a diminished heat. 5. Melancholick Blood is thick, and can neither be consumed by abstinence nor bathing: therefore it ought to be evacuated by Bleeding, as *Jacchimis* says *pr. c. 15*. 6. Because Phlegm, if it stay long in the Body, may be corrected, and turned into Blood by further Concoction: But Melancholy cannot pass into Blood, and by staying long in the Body, becomes *atra bilis* or black adult choler.

Zacut.
princ. med.
hist. lib. 2.
hist. 78.

VI. *Avicen* 4. 1. c. 20. forbids Bleeding in a great effervescence of choler: *When the Urine is thin and Fiery*, that is, is very Choleric, we must have a care how we Bleed. For if we Bleed, a victory of choler and an effervescence thereof is to be feared; because when the Blood is extracted, which is the bridle of the bilious humour, choler prevails more. This opinion of *Avicen*; that is exploded by many, is agreeable to the doctrine of *Galen*. For he says (*comm. in 6. Epid. f. 3. r. ult.*) *An impediment in those that spit Blood, is the season of the year, a pleurisy, choler*; where by impediment he means a prohibition of Bleeding. Therefore redundancy of choler, even in a disease that requires Bleeding, hinders it. The same (4. *de san. tu. 4.*) says that, *when the humours recede a little from the nature of Blood, we must let Blood boldly; but if further, then more warily; but if very much, we must take away none at all*. Likewise 9. *meth. cap. 5*. reckoning up the indications that dissuade from venesection, he abstains therefrom when the mouth of the Stomach abounds with bitter choler. Also 2. *ad Glauco. 2.* he forbids it in an exquisite *Erysipelas* and *Herpes*. The same he does in an exquisite Tertian (1. *ad Glauco. 9.*) And he gives the same advice in every other distemper that is the offspring of a bilious fluxion, and where choler recedes very much from the nature of Blood; for in such there is not a due strength of the faculties. And on the same account fasting hurts, because in the defect of alimental moisture, such Bodies being dried wax hot. So by Bleeding they are more dried and inflamed, and the humours ferment more. For the same reason *Galen* (1. *ad Glauco. 14.*) says that Bleeding is to be feared in climates that are excessive hot. He teaches the same 11. *meth. 4.* especially if the Blood be little and the choler very much; for though the humours flow out promiscuously, and abide in the same proportion in the vessels, there follows an evident

harm without benefit, because a great deal of Blood is let out for a small quantity of choler, and the vertue that ought to rule the bilious humour is dissolved; which humour being no longer under Natures government, does thereupon ferment and putrefie. But *Avicen*'s opinion is to be understood when the bilious humour is either in the first region of the Body, or in its *Ambitus* or surface: For the Veins being emptied by Bleeding, instead of the Blood that is let forth they snatch the bilious humour out of the first region of the Body, or from its habit, by the admission whereof the Mass of Blood is defiled and made more acrimonious: In which case Bleeding cools not, but heats; and Purging should be used instead of it, or at least go before it. Thus *Hippocrates* and *Galen* 4. *acut. 1.* admonish us, that continual Fevers are caused through the Veins being drained in the Summer time, and drawing acrimonious humours to them: And 1. *Epid. 2. comm. 20.* he says that Tertians spring from choler heaped up in the *genus carnosum* or fleshy parts. For then, when there is a *Cacochymy* in the habit of the Body, the Veins being emptied and dried through heat, are yet further emptied by letting Blood, and by the attraction of acrimonious ichors the heat becomes unbridled, and the choler effervesces, with fear left the raging choler, being thin and hot, should by its restless motion come to fall upon some principal part, &c.

Zacut.
princ. med.
hist. 63.
lib. 1.

VII. When the Blood it self is redundant, it is most powerfully and quickly lessened by Venesection; which benefit one shall in vain expect therefrom in the redundancy of other humours. For though by Bleeding the Serum be lessened in the Body together with the rest of the Blood, yet it is not lessened in that respect that it abounds. Now the Serum is said to be redundant in the Body, when there is more of it generated and heaped up therein, than its natural proportion with the rest of the Blood requires. Therefore when Serum is to be lessened, we must not think that it matters not though the Blood be diminished withal, whose proportion is then changed, and indeed so, that we should rather wish that the other parts of the Blood, besides the Serum, could be increased, than that they should be lessened together with the Serum.

Sylv. de le
Boe Ap-
pend. tract.
6. §. 156 &
seqq.

VIII. Blood is esteemed the greatest darling of Nature, by whose help she performs all her operations, and which we can hardly withdraw from her without prejudice: Yet art requires that those who will have to do with this darling, neither being bold nor fearful, but prudent and courageous, proceed to Venesection, being moved by no other reasons save these four. 1. Because of a *Pléthora*, that Nature may be eased of too great a burthen, and the natural heat preserved from suffocation. 2. To revel the Blood and other humours that are mixt with it, namely when by hastening to this or that part by too great a Flux, they hinder the cure. 3. To derive the Blood some other way that is already slid into any part, though it have as yet no fixed seat there, nor be extravasated. 4. To cool it, when it is inflamed with so great a heat, as can be slackened neither by cooling Medicines, nor by time. But some think that they are too much straitened within these bounds, desiring that corruption of the Blood should be an argument for Bleeding as well as the four reasons already rehearsed; that Nature being eased of a portion of the corrupt Blood, might the better correct and amend the remainder. But I would greatly desire, 1. That this evacuation may be made without prejudice to the faculties that are so necessary. 2. I would have them when they are by the Bed of the sick person, accurately to shew to what degree of corruption the Blood is already come, that thence it may be known,

Nnnnn

how

how much is to be taken away by Venesection, and how often; because Bleeding is not permitted in all putrefactions of the Blood, but only in that wherein it is not as yet come to any high degree.

3. They ought to shew manifestly for what reason they would have a greater corruption cured by Purging, but a less by Bleeding, seeing they give the true name of a Cacochymy, to this latter as well as to the former: I say, let them shew that things differing only *secundum magis & minus* (or gradually) do differ specifically, and therefore require a remedy different *in specie*.

IX. Whether a putrid humour be to be evacuated by Venesection, is not hard to resolve with those that advise bleeding in every Disease. But I say, if we must not depart from the rules of *Galen*, that no where in his Doctrine can it be found that this humour can be evacuated by opening a Vein, but either by purging Medicines, or by vomiting, or by diureticks, or hydricks: See the 7. & 8. Cap. of *Lib. 11. m. med.* If you say, how will the putrid Blood be evacuated in a *Synocha*, or also excrementitious humours distant from the Nature of Blood, when they are mixed with it? I answer, that the putridness of the Blood in a *Synochus* may be consider'd, either as the Blood as yet keeps its goodness, or as it has wholly lost its proper form. In the former case, it is not properly putrid, though it is beginning to degenerate; in which case we may let Blood for a plenitude, and for obstruction caused thereby. In the latter case we may not, 1. Because in such a corruption the faculties are not strong; 2. Because the Multitude (or *plethora*) hath degenerated into a cacochymy, which a purging Medicine corrects. And let the same Judgment be past upon the humours mixed with the Blood: For this mixture is made with the Blood two ways, either with a multitude of it, or without. The first admits bleeding, not on the account of the mixture, but by reason of the Plenty of Blood, that part being evacuated, Nature may preserve the rest from putrefaction. The Second does by no means require this remedy, seeing that only is to be evacuated that gives trouble to Nature, but such Blood gives none, why therefore should it be evacuated? Why will it like you to empty a Pound of good Blood, by opening a Vein, that you may bring forth an Ounce of excrementitious Choler mixed with it? How much this way of cure differs from the Opinion of the Ancients, this may witness in a special manner, That purgers bring some one kind of humour out of the Veins, and this is called properly to purge, that is, to chuse one thing that is mixt among many, and make it purer. I know that it is the opinion of some, that Venesection is always convenient when excrementitious humours are mixt with the Blood; but by what has been said, 'tis clear they are mistaken: And no less so are those who seeing the Blood corrupted, viz. bilious, craginous, or otherwise tainted, brag that it was well they took a great deal, and itch to be repeating Venesection every day, as if they were some common slaughter-Men. But *Galen* did not do so, who when the Blood was bad, in a time of Scarcity, forbade venesection; observing, that all those died who were bled upon an indication taken from a putrid humour.

X. A Man of fifty being cacochymical, and subject to great obstructions of the *Viscera*, having without purging first, or without any necessity or advice of a Physician, caused his right Cephalick Vein to be opened, having been at a great Dinner the same Day; on the following there rose a pain about the place of Incision, that was dull at first, but increasing and becoming more vehement by Degrees, there followed a great afflux of Serous humours, so that all from the shoulder to the Fingers ends was incredibly swelled, with Inflamma-

tion and Pustules every where bursting forth, out of which a ferous and acrimonious humour flowed in great plenty, so that a Gangrene was at hand; yet he was cured by the efficacy of Remedies. Hence it is clear how dangerous it is to move any thing in impure Bodies.

XI. Those who have the passage of Gall implanted into the bottom of the Stomach, and for that reason vomit choler daily, are troubled with a Nausea and bitterness in their Mouth, and are in continual Affliction, according to *Avicen* are not to be bled, because by bleeding the Choler returning to the Veins becomes more hot and boiling: Especially seeing the Faculties are not strong in these, seeing they endure great pains and gnawings at their Stomach, are seized with *Cardiogni*, swoon, are tormented with thirst, are convulsed, want an appetite, nauseate and are often taken with an inflammation of their Stomach.

XII. Not only plenty of Blood, nor the Extraneous or Elastick parts that are mixed with it, do cause it to have an *imperius*; but the Vessels that contain it do often incite the circulation. The story that *Dr. Willis* tells of a Woman that he had under cure, sufficiently proves that the Blood-vessels do stir up the Liquor they contain to an unusual and vehement motion. That Woman had been long troubled with a cruel Colick pain, joined with Convulsive motions: He order'd her, because of the greatness of her pulse, to be let Blood to four ounces out of the Jugular Vein, out of which the Blood issued with great violence: But being taken with an Apoplexy a few hours after, she died. Her Body being opened there were hardly to be seen four ounces of Blood remaining: So that it is hardly consonant to reason that from so small a quantity of Blood so strong and frequent impressions should be made upon the inner Nervous coats of the Heart and Arteries, as to put these Vessels upon driving the Blood about so rapidly: And therefore it is very likely that the Heart and Vessels themselves impelled the Blood, the Blood it self not concurring thereto. We may likewise infer that from the vehemence of some passions of the mind, joy, anger, &c. the Channels of the Blood do of themselves promote its motion, because the lucid and sense-causing Spirits, being moved more than usual, do rush more vehemently out of the Brain into the Nervous Channels, those perhaps especially that send branches into the Heart and the Vessels that spring from that Bowel, whereby it comes to pass that the constrictions of the heart become more frequent and vehement. In such a case as this it were rashness and imprudence to fly to Venesection, and to order it as often as we would do in inflammatory diseases.

XIII. Because the Blood that is poured out at the Nose, appears florid and saturated with a splendid redness, it is commonly believed to be more pure and sincere than the rest: The reason given is, because it is poured forth by very slender Vessels, which ('tis said) admit not the thicker Blood. But the whole Mass of Blood, together with all the humours it consists of, is percolated, at least in the Liver, as all agree (which the Physicians that defend the old Hypothesis ought to have noted, who likewise teach that the thicker Blood is evacuated by the Hemorrhoids, and issues out of the Capillary Vessels.) If they say that those small Vessels are widened by the turbulent and more vehemently fermenting Blood, why say they not the same of the Vessels of the Nostrils? Besides, that Blood which flows out of the Hemorrhoids, is sometimes no less bright and red than that which runs out of the Nose: Therefore neither the saturate redness of the Blood, nor the finalness of the Vessels out of which it issues, evince that that Blood is purer than the rest.

Fabr. Hild.
cent. 4. obs.
71. See another instance there obs. 70.

Zacutus.

Gautier, medic. N. vortensis in Merc. an. 1681.

H. Auger.
tom. 1. l.
10. Epist.
4.

Fr. Baile
probl. med.
2.

rest. We shall easily find a reason of its deep redness, if we observe what happens to the Blood as to its colour, as it flows out in this or that manner, out of these or those Vessels. The Blood that flows out of an Artery being cut, is (*ceteris paribus*) more bright and red than that which flows out of a Vein: Likewise the Blood, from whencesoever it flow, that destils out by drops, is redder than that which issues forth in a full stream by a large Orifice. Blood let forth into a broad Basin looks very red: If the same be received out of the same Vein into a narrow and deep Vessel, it inclines more to black. Lastly, If the Blood that is let out of its Vessels be received in a cold place, it becomes more ruddy, if in an hot one, more black. Thus the Blood that flows out of the internal Hemorrhoids, if it be retained in the streight Gut, looks more black; but more red if it issue forth presently, unless some special cause hinder. From these things it is evidently gathered, that the Blood when it is suddenly cooled, becomes more red; when it cools by degrees or leisurely, it is more black: Now it cools the sooner when it issues out but in a small quantity, because a little is less able to resist the ambient air than much is: It is sooner cooled when it is received in a large or wide Vessel, than when in a narrow and deep. From these the rest appear. Therefore the reason why the Blood that flows out of the Nose looks more red, is not because it is purer, but because it is suddenly cooled. What the quickness or slowness of cooling can do towards variety of colours, we may observe in Steel when it is temper'd; for if a bar of Steel that is red hot be moved very swiftly through the cold Air, it puts on a reddish colour; if not so swiftly, a colour that inclines to yellow; if yet less swiftly, it looks blue; if very slowly, it receives the natural colour of Steel: For like as Bodies that are very hot are cooled quicker or slower, are the insensible particles of which they consist disposed on this or that manner, and they diversly modifie the light which they reflect, in which modification does their colour consist. Not only the quickness of cooling makes the Blood of a more saturate colour, but also the motion of the particles of the Air, which by licking as it were the surface of the Blood, and depressing the particles that jet out, make it more smooth, dense and slick, and so makes its redness more bright, through the greater reflexion of the light. Thus Red wood looks redder when it is smoothed and polished by some convenient instrument. From the same cause the Blood that was blackish in the top of the Vessel, if it be exposed to the Air, acquires a more saturate and splendid colour, namely because its dispersed and eminent particles are depressed and compressed into a dense skin, which reflects more light than the same Blood, when its particles were loose and less cohering, because then a great deal of the light did penetrate into the interstices of the parts, and was not reflected at all, and the rest falling upon soft parts was reflected but weakly.

Fr. Bayle
probl. med.
2.

XIV. From the precedent problem it is easily understood that a sudden mutation from heat to cold, and the appulse of the Air, are the cause of the redness where the Blood that is poured forth shineth: Hence it follows, that as often as the Blood is red, it has undergone the greater and more sudden change; which happens two ways, either because the Blood is hotter, or because the ambient Air is colder: Wherefore in an equal temper of the ambient Air, other things being also alike, a notable redness of the Blood is a sign of its notable heat: therefore a florid redness of the Blood is not a certain token of malignity. Yet if horrible Symptoms accompany a Fever, such as none but

a notable putrefaction can produce, and yet a putrefaction of the Blood cannot be deduced from its colour, those grievous Symptoms are to be referred to some malignity.

Idem.

XV. To prove that the Elements of the Blood are the four vulgar humours, to wit Blood so called *in specie*, Choler, Melancholy and Phlegm, some take an argument from the variety of colours in the different parts of the Blood when it is cold in a Poringer: for they affirm that that which is florid in the uppermost part, is choler, which because it is fiery, gets a top through its lightness; that which is next under this is Blood, which being hot and moist, hath an analogy with the Air; below this is Melancholy; which being of an Earthy nature, descends to the lowest place by its weight: Phlegm, which resembles the nature of water, they say is mixed with Melancholy, as Water is easily mixed with Earth. Besides they say that the said humours do yet more betray themselves by their colour, especially Blood and Melancholy: The manifest token of the former is a splendid redness, and of the latter a blackish colour. Indeed those who think thus, do notably accommodate these *phenomena* to their Hypotheses: But from what has been said it is evident that the uppermost part of the Blood is red because it is very quickly cooled, and is more immediately affected by the pulse of the Air, and that the lowest is blackish, because it is cooled by degrees, and the Air acts only remotely upon it. Wherefore it depends on the pleasure of the Surgeon, whether all the Blood that is poured forth of any Vein shall look intensely red or no; for so it will look, if it be received in a wide Basin; but blackish, if in a narrow and deep Vessel, or if it be set to coagulate in a warm place: Thus Blood may be accounted almost all of it Melancholy, or all of it Blood *in specie* so called, as it cools on this or that manner. Therefore it is a weak argument that is taken from the colour of the different parts of the Blood cooled in a Vessel, to prove that its elements are the four vulgar humours.

Idem.
See below
§. 21.

XVI. Nor may we always from the colour being changed infer that the substance is changed or corrupted; for we see many Bodies change colour without any sensible detriment to their chief faculties, seeing they put forth the same actions as before, and with the same strength. But in Heterogeneous Liquors there can hardly be induced a colour much different from what they use to have, but they must undergo a great change, especially if they be of the kind of those that are very easily alter'd, through the mutual action of the parts that constitute them, whether those parts be determin'd to act upon their fellows by external agents, or be stirred up to divorce by the mixture of extraneous Bodies, by which ways both Blood and Milk are very easily changed, suffering on this side divers Secretions, and on that, Concretions of their constituent parts: Hither does that retire that is thin and more fluid, and there does that coagulate which is more thick: All which things can hardly happen but there must be some change in colour, and hardly can Blood undergo such a change but these things preceded. Wherefore one would think that the colour of the Blood might shew whether and how great its putrefaction is. Moreover a livid or black colour both in the Blood and in the Flesh signifies that there is a putrefaction a growing, or already grown therein, as we may observe in a Gangrene and Mortification: And though Pus or Matter be the offspring of the Blood or Flesh putrefying in a certain manner; yet they are not changed into Pus till they have past into a sublivid *Sanies*. Putrefaction consists in the dissolution of the parts from one another, so as that they fall asunder, or be

be very ready so to do: Putrefaction, I mean, properly so called, which is in the Bodies of Animals. Such dissolution of the parts is necessarily accompanied with blackness, the parts being dissipated that reflect the light more strongly and plentifully, or being however become sorer. Therefore when the Blood looks black, not only in the bottom of the Vessel for the reasons given in the preceding Paragraphs, but also in the very surface, where through its proper constitution from the sudden cooling and appulse of the Air it ought to be red, 'tis a certain sign that there is some putrefaction in it. If the Blood be not only black, but also do not coagulate, it signifies that the putrefaction is diffused through the whole Mass, the Fibres being corrupted by which the Blood should curdle. If the Blood look red in its surface in one place, and in another incline to livid; if here it look palish, and there yellowish, &c. it is a sign there is a great disposition to putrefaction: For that variety of colours cannot happen unless many and Foreign and diverse things be mixed with the Mass of Blood, which whilst they act upon one another, corrupt the Mass of Blood. There are innumerable things to be inquired concerning the colour and consistence of the Blood, the knowledge whereof is greatly necessary for the knowing of diseases and Morbifick causes.

Idem pro-
bl. 6.

XVII. When in Venesection the Blood that runs forth is received into Water, that part that gives redness to the whole Mass, is separated from the rest and mixt with the Water, and the remainder, or a great part of it, for the most part grows together into whitish Fibres. Some think that what is Phlegmatick in the Blood, or Phlegm itself passes into such Fibres. It cannot be denied but Phlegm is always mixed with the Blood, seeing even in the healthful something of Phlegm does continually descend from the Brain upon the Fauces, and from thence into the Stomach: But I can hardly be brought to believe that the Filaments that grow together in the Water are mere Phlegm, but I should rather think that it is that part of the Blood which was ready to pass into the substance of the solid parts; for both of these are white. And it is an argument hereof, that such as have more and more firm Flesh, and a more robust Body, in the same is the Fibrous part of the Blood the more plentiful: And in the lean, whose Blood is more acrimonious, or corrupted, there are fewer of those Fibres. Therefore from those whitish Fibres it cannot be inferred that the Blood is Phlegmatick, but that it has a greater or lesser consistence, accordingly as these Fibres abound more or less. Besides from the colour of the Fibres it may be inferred whether the Blood incline to a Choleric, Phlegmatick or Melancholic constitution. Thus heretofore Hippocrates knew by the rags of a menstruous Woman, having first wiped away the red part of the Blood, whether the Blood were bilious, &c.

Idem pro-
bl. 7.

XVIII. I do not think that snivel which (sometimes) swims a top of the Red Blood, is always excrementitious Phlegm, but rather the crude part of the Blood elaborated from the chyle, but not as yet concocted enough, nor brought to that perfection it ought to have, but wants to be perfected by the repeated circulation of the Blood. Aristotle himself calls that *Mucago* or Snivel, the crude and unconcocted part of the Blood. Harvey (*lib. de generat. animal. p. 319.*) says that that part is found in the more hot and robust Animals, as Horses, Oxen, and Men also of a vivid constitution, and swims a top like Hartshorn gelly or the white of an Egg somewhat thickned: And he does not reckon it to be the cruder and colder part of the Blood, but the more Spiritual, seeing it swims above the florid and rutilant part in the

coagulated Blood, and abounds chiefly in persons of an hot temperature, the robust and well-set, and comes forth with a greater violence in Venesection. I have sometimes seen this gelly lie under the ruddy part. But by a diligent inspection for many Years of the Blood that has been let, I have only observed that this *Mucago* is not found in those that use a spare diet, and are of a good temperature, but frequently in the gluttonous and such whose Bowels are indured with a weaker heat: whence it is almost always observed in the Phlegmatick and Old. I never saw it flow out of the Veins of the Head, often out of those of the Arm, but most often out of the Veins of the Feet and in a larger quantity. It is sometimes also found in persons of the best constitution; and the reason is, because these from the vehemence of their appetite eat heartily, and sometimes more than Nature can presently turn into good aliment, whence part thereof remaineth more crude, but yet by a frequent circulation of it through the heart, especially if a more spare diet follow withal, it is at length turn'd into good Blood, that so we may be sure this gelly is the parts of the chyle not as yet sufficiently concocted in the work-house of the Heart.

§ Blood that is wholly destitute of fatness, or wants it in part, is not very commendable: A plenty thereof makes the Body fleshy; its unctuousness, fat; and its leanness, lean. This opinion of mine may be confirmed by examining the Blood that is let forth by venesection: For the upper part thereof that many take for the Phlegm of the Blood, and so is esteemed for a faulty part, is often the best Blood. This may be known by the Fire; for if it be Fat, it will flame; but if Phlegm, then it uses to crackle.

XIX. In Bleeding in a Pleurific when the Blood is cold, it looks like melted Suet for a considerable thickness, and its surface is like true Pus or Matter; and yet it is far different from it, seeing it is straitly woven with Fibres like the rest of the Blood, and runs not about like Pus: But when this discoloured part is pulled from the rest, it looks like a tough and Fibrous skin; and perhaps is nothing else but the Fibres of the Blood, which being deprived of their Red and Natural cover by precipitation, are grown together into such a whitish membrane by the coldness of the Ambient Air. But (to touch this by the by) we must note, that if the Blood issue not forth of the Vein in a straight stream horizontally, but creeping along the skin fall Perpendicularly, let it run this latter way never so fast, yet often it will not be of the said colour: Of which I confess I know not the reason. Nor is the Patient so much relieved by such Bleeding, as when it flows forth in the manner first described. Yea though it flows out this very way, if a too narrow Orifice, or any thing else hinder it from running forth in a full stream, neither in this case will the Blood look like that of the Pleuritical, nor will the Patient be so much benefited by it. Moreover I have observed, that let the Blood flow out how it will, if one stir it with his Finger as soon as it is received into the Poring, its surface will look as Red and florid as in any other disease.

XX. The Blood that is taken forth by Venesection looks often very dry and destitute of all Serum after some hours, which is commonly imputed to too great heat or adustion: But this reason is very feeble; for if on the same day you open the same Vein again, or another, you will find Serum enough in the Blood that comes forth. So that the true cause is to be sought in the circulation of the Blood, but especially in the Lymphatick Vessels, which at that time attract the Serum and moisture, and make the Blood drier.

XXI. When

Morbius
fundam.
physiolog.
cap. 13. p.
222.

Barbette
Anat.
Prætic.
cap. 13.

Sydenh.
obs. med.
cap. de
pleurit.

Barbette
Anat.
Prætic.

Frid.
Holm m.
m. l. 1. c.
10.

XXI. When the Blood is cold in the Porringer, then that which is in the bottom looks far blacker than that which is in the upper surface. Indeed it is a common opinion that that black Blood is Melancholick Blood, and men are wont to use this as an instance to shew that the Melancholick humour (as 'tis called) together with the other three enter the composition of the Blood. But *Fracastorius* affirms that that black colour proceeds from hence, viz. Because that Blood which is in the bottom of the Porringer is not exposed to the Air, and not from any mixture of Melancholy with the Blood: Which that he may demonstrate, he says the colour it self will change and become clear and red, if it be exposed to the Air.

Ex Aff.
Reg. Soc.
Angl. p.
153. Ann.
1667.

XXII. Seeing *Revulsion* helps Fluxion by way of *Vacuum*, it follows that every evacuation does not do it, but only that which is large, so that thereby there be made an inanition either of the whole, or of the parts that lie next to the part affected. Which I say for their sakes that think to avert a Fluxion by extracting two or three ounces of Blood: and believe that they shall do this more effectually, if they let forth that little quantity not all at once but at several times, stopping it ever and anon: for seeing a *Vacuum* happens not by such evacuations, by means whereof the Fluxion to the part affected is hindered, how shall they cause a *Revulsion*?

Martian.
6. Epid. 5.
v. 17.

XXIII. In *Revulsion* we must mind in what quantity Blood is to be let; whether together and at once, or by repeated turns? Though Authors commend this latter way, yet reason and experience teach that a certain distinction is to be used. For first we let Blood at one turn out of the larger Veins in an Afflux of the humours without effusion or evacuation: but at several turns out of the lesser Veins in an Afflux with effusion, as in an overflowing of the Terms, or too great an Hemorrhage. Secondly, We let Blood all at once when the Matter is already flow'd into the part, and remains in it: but by little and little while it is but a flowing into it. The Quinsie, Pleurisie, &c. afford an example.

Frid.
Hofm m.
m. l. 1. c.
20.

XXIV. We gather from *Hippocrates* (l. de nat. hum. v. 230.) the difference between the curing of a disease present, and the preservation from one imminent: We must endeavour to make our Sections as far as may be from the parts affected, &c. Because in the former case Venesection is to be made out of the Veins that are nearest to the part affected. Whence *Galen* (6. aph. 36.) has noted that our great Master used always to let Blood out of the Arms for diseases above the Liver; but for those below, out of the Legs and Ankles; a reason whereof is given by *Celsus*, l. 2. c. 9. Nor am I ignorant (says he) that some say, that Blood is to be let at the greatest distance from the part affected, for so the course of the matter is averted, and that which already oppresses the part is called forth. But this is false; for Bleeding first exhausts the nearest part; and the Blood therefore follows from the remoter parts, because it is first let forth of the nearest; but as soon as it is stop'd, it comes no longer from afar, because it is drawn. *Hippocrates* has confirmed that same precept, lib. de loc. Sect. 2. v. 285. where speaking of all evacuation he says; But diseases are to be drawn forth by that part which they are nearest to, or by the nearest outlet. Which at length he hath more particularly expressed even in the evacuation that is made by Medicines: Pains above the Midriff that need purgation, intimate that they should be purged by Vomit; but those below by Stool. But for prevention of those diseases that have been used to invade often, *Hippocrates's* opinion is, that Blood should be let at the greatest distance from the part affected: Of which he gives a double reason; namely, 1. Left there be a great change made on the suddain in that part which is used to be ill:

For by such change the humours being for the most part moved, and the part it self further weakened, fluxions towards it are excited, whence the accustomed Diseases are raised. Which Precept many Gouty Persons not observing, whilst they will Bleed or Purge for prevention, they often raise those pains that were quiet. 2. Another reason is, that by Venesection made in distant parts the custom may be removed, by which the humours used upon any occasion to flow upon the part accustomed to be affected. By which it is clear that the *Revulsion* which is made from the remotest parts is not good in the Cure of present Diseases, unless one would stop Symptomatical evacuations; for then *Revulsion* is to be made, according to the advice of *Hippocrates* 6. Epid. 2. 50. We must reveal, if the humours run whither they should not. ¶ The several kinds of *Revulsion* profit and gratify diversly: For to Reveal to the Origin is usual in those Diseases which rise from some peculiar Member: *Traction to distant parts* is good for those which are fed by the whole Body: But *Tractions to contrary Parts* are profitable for both; Namely, to a part that is Contrary to that from which, and to which the matter flows: And moreover it has this use peculiar to it self, that it is most beneficial for prevention, Nature, as I said, being called off to that part which is contrary to that to which she is inclined. Nor matters it that the same Veins are to be opened both in prevention and Cure; seeing this *Revulsion* is owing to the motion and custom of the humours, rather than to the Disease and Humour.

Pr. Marti-
an. comm.
in cit. loc.
pag. 17.

Mercat. de
ind. med.
l. 1. c. 4.
where it is
discourged
more at
large of
revulsive
and deri-
vative
Bleeding.

XXV. Some make the Kidneys the Centre of the Body, as to its length; but this is better referred to the Heart. It is better to Bleed on the same side with the part affected; the Reason is in the Arteries, not in the Veins.

Walaus
p. 81.

XXVI. If the Blood be observed not to Circulate as it should do, by the Pulse's not being full enough, but little, and from anhelous Respiration, I think bleeding altogether necessary: And these two indications that are taken from the Pulse and Respiration, I would recommend to the diligent observation of every one, seeing they are of great Consideration in many Diseases as to Bleeding. I say, a little and an oppressed Pulse, yet soft, as also a laborious and anhelous respiration, are the chief signs and indications of the Blood's stagnating about the Ventricles of the Heart, and threatening danger of suffocation.

Sylv. de le-
Boe prax.

XXVII. *Hippocrates's* Precept (Aph. 22. 1.) of purging in a turgency of matter, is not observed in ordinary practice; but when there appears an Orgasm of the humours, we rather fly to bleeding as more safe, and so we the more easily prevent the moved humours from rushing into some Noble part, which if they were more exagitated by a Purge might be the more readily precipitated into it. ¶ We may gather from *Galen*, that bleeding may be allowed in a turgency of the humours. Which that it may be understood, I premise these things: 1. That the turgent humours are not always Choleric, but sometimes Sanguineous, Blood here being taken for a fervent humour, resembling Choler. And such Blood is Turgent, because it is moved very quickly and easily; so that I believe acute Diseases arise from it, as they do also from pure Choler: Whence many dangers threaten, because it may very easily run into the Principal Parts. 2. I premise that in a Turgency of the humours there may also concur sometimes other Reasons for Bleeding, as some fault in the Sanguineous matter, the greatness of the Disease, the Strength of the faculties and a Youthful Age. 3. But if purging be compared with Bleeding in a Turgency of the humours; the former doubtless is more to the purpose and more profitable, but the latter is safer. And because according to *Hippocrates* (1. Epid.) a Physician ought to endeavour so to profit as that he may do no harm withal, therefore Bleeding may be sometimes used

River.
pract. l. 17.
c. 1.

O o o o o in

in the room of Purging. If you object, That Purging draws only bad humours, but Bleeding all; so that one cannot be substituted for the other: I Answer 1. that Turgent humours that are different from the nature of Blood, are also evacuated by Bleeding, as being in motion. 2. That Bleeding is not always substituted, but only sometimes. If you object again, That where Bilious humours are turgent and such as differ from Blood, the Blood it self does not offend, and therefore it is not proper to substitute Bleeding: I Answer, That in such a turgency of humours Bleeding is not to be substituted indiscriminately, but only where there is a most vehement Fever, which rather requires a friendly Venesection, than offensive Purgers, which are hot and apt to induce a Fever. Now that a violent Fever requires rather Bleeding than Purging is not doubted. Whence I draw these conclusions: 1. If the humours be mixed with the Blood, without doubt Bleeding is proper, as appears by the faultiness of the Blood that is let forth. 2. If the turgent humours be different from the nature of Blood, but there be present an high Fever, strength of the faculties, a youthful Age, I approve of Bleeding; and so much the rather, because in such case there is always some fault in the Blood also. 3. If humours differing from Blood be turgent, and prohibitors of purgation be wanting, as also indications for Bleeding, then by no means must we breathe a Vein, but only insist upon Purging, as that which will afford no small relief, and do much more good than harm.

Claudin.
Respon. 2.

XXVIII. Though Revulsion be commonly used in the very Paroxysm, yet it is also profitable after it, that the morbid relieves may be quite taken away, so that a new fit may not come. Thus in a suffocation of the Womb proceeding from the retention of Blood, as also in other diseases, fit help is given by Bleeding, as well in the Paroxysm when necessity urgeth, and there is danger of extinguishing the natural heat through the abundance of Blood, as out of it, as whereby the superfluous Blood that is preternaturally retained is evacuated, translated from the Womb another way, and the imminent suffocation of the Spirits and heat removed.

Gr. Horst.
probl. dec.
9. 9. 3.

XXIX. When critical evacuations appear, viz. *Exanthemata* or Spots, *Parotides*, *Bubo's*, &c. whether may we Bleed? We must first shew what *Exanthemata* and Abscesses are, and from whence they arise. *Exanthemata* are little Prominences in the skin, or red, pale, purple, or blackish spots, sometimes all over the skin, sometimes scattered here and there, one while thicker, and another thinner, sometimes broader, sometimes more united, and sometimes not raised at all above the surface of the skin. That is called an Abscess, which from a defluxion of matter transmitted into any part of the Body, either inheres in it, or raises a tumour, as the *Parotides* under the Ears, and *Bubo's* in the Arm-pits and Groins, or Carbuncles, and other such like, under which name Abscesses and *Exanthemata* are comprehended: For there are also critical evacuations by Stool, Vomit, Bladder, Womb, &c. but these use to be called Abscesses by emission, and the former by deposition, from which we will take no indication of either letting or not letting Blood, but from the Diseases and Symptoms that follow them. The matter of *Exanthemata*, and *Bubo's*, Carbuncles, and the like Abscesses, is Blood, that is unprofitable to the Body either through its quantity, or faultiness, or on both accounts, which Nature by way of Crisis endeavours to thrust out of the Body at some certain time, which thing she sometimes performs without any help, but sometimes being oppressed she is overcome,

needing the help of art. Therefore Venesection will be unprofitable while *Exanthemata* and other the said Abscesses are breaking forth, or a little after, whilst the Fever, and other bad accidents (if there be any) seem to be remedied or evidently to be mitigated; for that signifies that the strength of Nature is above the morbid cause: Wherefore the Artist ought in such case to see that he do not imprudently weaken or disturb the endeavours of Nature that are well begun. But if the said endeavours be either wholly unprofitable, or less effectual, then it is a sign that Nature is oppressed by her burthen and overcome by the cause of the disease; and unless she be helped, she often lies vanquished in so dangerous a combat. Therefore as she was not to be interrupted while she shew'd her self a Conqueror; so neither is she to be left destitute of help, when she yields the Physician any signification of her weakness and oppression: Which is the opinion of Hippocrates and Galen, 1. aph. 20. *What diseases are judged, and are judged intirely, &c.* Also 2. aph. 12. *These which are left, &c.* If any say, It often happens that imperfect crises are prolonged for several days, so that it seems nothing is to be moved either on the day the *Exanthemata* break forth, nor also on the day following? I Answer, That no certain stated and universal rule can be given in these cases; but it is the part of a prudent Physician to discern when Nature is to be helped on the first day, or on the second, or later; or when she is to be left without help; seeing she wants no help, if buckling to the work on the day of the crisis she either remedy or greatly lessen the disease; but otherwise if she do not. Add that Bleeding may also be profitable, when by the eruption of these the maladies are somewhat mitigated. So that I do not put off Bleeding (though otherwise Blood were let before their eruption) if I see the Fever to decline but slowly: For even these are sooner cured thus, as the other (if they do recover) both sooner and more safely. Let us therefore say with Hippocrates and Galen, that Judicatories (or Crises) which do not terminate the disease, are signs of a predominant and perverse humour that stimulates Nature to an overforward excretion. Therefore Nature shews that she desires help, and that by Bleeding rather than Purging. For the reason is at hand, and that a very strong one, seeing in the cases proposed the cause of the disease is in the Veins, not in the Intestins. Add hereto, that Purging, besides that it disturbs all the Body, recalls both the impetus and motion of the humours to the principal or internal parts. Hence Hippocrates says, 4. *Acut. Syctrophæ* (a sort of Abscess) cannot be dissolved by Purging; for in these Venesection is to be preferred, &c. Wherefore Purging is only allowable by art either in the beginning of a Fever, or when the humours being concocted are prepared for excretion: But Blood (if the Nature of the disease require it, and the faculties gain say not) may be let at any time. Nor is this conceit of ours of evacuating the Body in the *Parotides*, or in *Exanthemata* that relieve not the Patient, new, or not confirmed by Galen in his explication of these words of Hippocrates, 6. aph. 9. *Broad Exanthemata itch not very much.* You will object again, that by Venesection, that is called inwards which Nature had begun to expell outwards, viz. from the circumference to the centre? I Answer, That that only happens in superfluous effusions of Blood, and not in such as are made artificially. And by this reason which is brought, Venesection is not so strongly disproved in this place as purging, which they are not against, but sometimes inopportune propose it. But suppose something be pulled back, which yet there is not, the profit in the mean time that follows upon

upon a convenient evacuation of the burthening Matter, is greater than the injury that could happen from a little corrupt matter received into the *Vena cava*. But let us confirm the matter by examples: A putrid and notable *Synochus* (or continual Fever) invaded a strong young man; on the third day he had a Looseness like a *Diarrhœa*; the next day the Fever and Looseness continuing in the same vigour, red *Exanthemata* very thick and somewhat raised above the skin appear all over the skin: the following day, which was the fifth from the invasion of the Fever, seeing all the mischiefs to continue vigorous, I advised to take eighteen ounces of Blood from him; whereupon they all began so to decline, that two days after there remained no foot-step of them. From another Youth that was sick of the same disease, but without a Looseness, I ordered a pound of Blood to be taken: When I order'd it, it was the fourth day of his sickness, but the second after the eruption of the *Exanthemata*; and on the fifth day from the beginning of the disease he returned again to his usual occupation.

But in curing *Exanthemata* that arise without a Fever, or which precede it, such as were observed in many in the Summer of the Year 1575, both in Women and Youths, and grown Men, namely very thick Prominences all the Body over, that were broad, hard, reddish or pale, such as those caused by the stinging of Nettles, sometimes with itching, sometimes without, seeing there is no Physician almost but presently flies to the proposed remedy: there is therefore nothing remaining to speak of these, save that it is an error to Purge before Bleeding, seeing the said disease for the most part happens from the effervescence and redundancy of the Blood; and in case of costiveness, Clysters are to be used.

What I have said of *Exanthemata* breaking forth with a defective Crisis, take the same things as spoken of *Parotides*, *Bubô's* and other *Abscesses* of the like sort breaking out before the due time; namely, that it is best to let Blood in such case, viz. When the Fever neither grows less nor increases upon their breaking forth, for this I have found to be very profitable in many, &c.

XXX. Phlebotomy uses often to amend the mixture and temperature of the Blood, but in a manifold or several respect. For 1. If any Heterogeneous thing be confounded with its Mass, namely, which can neither be rightly subdued, nor easily separated and thrown off; the Blood that flows out upon opening a Vein does often carry forth so much of that Matter with it, that the remainder may either be conquered or expelled. 2. The Blood departing from its temperature, is often restored by Venesection: for when its Mass hath degenerated from a fixt Sulphur or Salt, or from both of them exalted together, into an Acrimonious, Salt or Salino-Sulphureous, by letting forth a portion of the Blood there presently arises a new fermentation of it, and often there is caused such a change of all the particles thereof, that thereupon the Spirits do a little emerge with the Volatil Salt and recover their dominion, the fixed Sulphur and Salt being subjugated (as they ought to be.) For this reason it is, that Bleeding often brings great help not only in Fevers, but moreover in the Scurvy, Jaundise, yea in the beginning of a Phthisis or Consumption: for the Blood, after the Vessels are emptied, like the Stomach unloaded, does better concoct or assimilate all the humours received into it, and what is Heterogeneous it the easier separates and dischargeth. But if the Crasis or mixture of the Blood begin to be much loosed and spoiled, as in the Plague and Malignant Fevers, abstain wholly from Venesection, because by letting of Blood, the store of Spirits is diminished (which alone can free the

Mass of Blood from putrefaction and corruption) and so all things tend presently to a destructive dissolution. Moreover if the Dyscrasie of the Blood be such, that the more noble principles, to wit, the Spirit, volatil Salt and Sulphur being depressed or wasted, the watry and earthy particles are predominant, the Blood ought by no means to be let out, but to be preserved as the treasure of life: Because when the Spirits are but few, every loss of them causes all the faculties to stagger, and strengthens the disease, as in a Dropsie, Cachexy, Consumption; and in other diseases, where the active principles are greatly depressed, to open a Vein is almost the same thing as to cut a mans Throat. In the aforesaid cases, where the Crasis of the Blood is respected, it will be easie to determine whether Bleeding be convenient or no; but in some others, as especially in a continual putrid Fever, when life and death turn upon this hinge, there needs the greatest deliberation. We must consider the state of the Blood, the tendency of the morbidick Matter, and the strength of Nature. 1. If in a putrid Fever the Blood situating very much, shall raise a great heat with thirst, watching, and drought in the Throat, and there appear no eruption of plentiful Sweat, or of *Exanthemata*, nor is shortly expected, Venesection is so plainly indicated that it is not lawful to omit it: But on the contrary if in a languishing Body there arise a Fever that is slow and remiss, yet continual, with a weak pulse, abstain from Bleeding, and get the Fever off by Sweating, Urine and Blistering. In a middle state of the Blood and of the Fever, Bleeding is indifferent of it self, and it is to be determined by other respects. Therefore 2. We must consider the tendency of the morbidick Matter, or its impetus, which if it be sluggish in the morbidick Matter and unfit for Secretion, and so (as it often uses) making a translation into the Head, instead of a Crisis, threaten the Brain and Nerves, Bleeding is seasonably made use of for preventing these mischiefs. But if this matter being suddenly excited into a violent motion, and either rushing inwards into the Viscera of the lower belly, cause cruel Vomiting or dysenterical distempers, or else being driven outwards seem about to produce the small Pox, Measles or other breakings forth, every such Impetus of Nature, if good, ought not to be disturbed, if bad, not aggravated by Bleeding: For in these cases to let Blood is not only dangerous, but oftentimes ignominious. 3. As to Bleeding in a doubtful case, we must moreover have regard to the strength of the Patient: For in a sound constitution, Youthful age, the beginning of a disease, and when the faculties both vital and animal are as yet in a brisk and indifferent condition, Bleeding ought to be confidently prescribed, unless something contra-indicate: But when it shall be otherwise as to these conditions, proceed not rashly to this evacuation.

XXXI. Avicenn denieth that Blood is to be let in the beginning of diseases, because thereby the noxious humours are then extenuated, and impelled through all the Body, and are so mixed with the pure Blood, that nothing of the offending humour is brought forth with the wholesome juice. lib. 1. fen. 4. c. 20. Likewise, lib. 3. tr. 2. c. 7. in the cure of the Foot-gout and *Sciatica* he would not have us to let Blood in the beginning, Because Phlebotomy, says he, stirs up the humours, and makes them run into the Body, and does not extract that which is necessary to be extracted. So lib. 4. tr. 2. cap. 42. in the cure of a burning Fever he dissuades the same on the same account: yea even in a Sanguineous Fever he would have us to Bleed moderately in the beginning, but plentifully after maturation or concoction. He is refuted by *Fernelius*, l. 2. meth. c. 13. 1. Because the greatness of the disease, which sprang from the exuberance

Willis
posib. e.
per. sect. 3.
c. 1.

Leon Bo-
tallus lib.
de curac.
per f. m.
cap. 5.

of the Blood alone, requires Bleeding presently at the beginning. 2. Add hereto that the strength is intire in the beginning; which, an indication of the disease being given, persuades to Bleed presently in the beginning. 3. Because it is manifest also by experience, seeing a *Febris synocha* is cured presently in the beginning by a large Bleeding. 4. Yea seeing concoction is rather owing to a *Cacochymy*, it will follow that the indication for Bleeding does tarry for no concoction of the contained Matter that is to be taken away by Venesection: Wherefore, after a perfect concoction of the humours, there will rather be place for Purging than Bleeding, which *Fernelius* demonstrates at large. To *Avicenna's* reasons it is thus Answer'd. To the *First*, By denying that Bleeding does extenuate the humours, because there remains the same proportion of them in the Veins before and after Bleeding. To the *Second*, By denying that Venesection stirs up the humours, seeing it uses not so much to exagitate, as to stop the organ of the humours. For a conclusion let it be noted, that as we judge *Fernelius's* assertion to be very contemporaneous to truth; so we determine that *Avicenna's* opinion is not to be taken absolutely, but *secundum quid*, as he distinguishes betwixt a disease *in fieri* and *in facto*, with respect to particular diseases: And he denies that when the disease is *in facto*, or already formed, Bleeding is convenient in the beginning, because the matter that causes the Gout is no longer in the Veins. And the reason why concocted matter permits Bleeding, is because Nature being now more at liberty, and no longer busied in correcting any particular malady, has her faculties strong, and willingly admits of Bleeding for the prevention of a new Fluxion. Thus Venesection is forbidden in the beginning of a Burning-Fever, in regard the Fever indicates something else: And thus he commends moderate Bleeding in the beginning of a Sanguineous Fever: Perhaps that the faculty that languishes through the oppression, may be leisurely comforted, and so afterwards may better sustain a plentiful Bleeding, when there shall be a maturation of the Fever, that is, when there shall be a freer ventilation of the Febrile heat.

Horst. in
fir. med.
disput. 18.
qu. 8. See
Zacut.
prax. hist.
or. l. 4. c.
15. Clau-
din. Ref-
pons. 2.

XXXII. A redundancy of Blood is chiefly taken away by Bleeding: But it is questioned whether its abundance may not be taken away also by other means? *Walaus* says, That we may waste it by fasting. For seeing our Natural heat is never idle, but always requires something to act upon; thence it comes to pass that in defect of aliment it sets upon the Blood it self and wastes it: Wherefore fasting may be safely used to consume a Plethora. And *Erasistratus* seems to have been of that opinion, if we may believe *Galen*. But we say 1. That a Plethora is lessened indeed by Fasting, but by degrees, not of a sudden, as many acute diseases require. 2. By fasting we use a certain violence to Nature; for fasting is fruitful of divers Symptoms and diseases, and is able to kill in the space of a few days: Whilst in it the vigour of a well disposed digestive ferment having no object to act upon, doth waste and consume the proper aliment of the Stomach, whereby not only in a sound body the good and profitable humours are wasted, the body dried and consumed; but also in a *Cacochemical* and impure Body the corrupt humours are moved and agitated withal, and Nature swerving sends part of them, for want of good aliment, to the Stomach, which is not a little disturbed thereby, and by consent therewith the Brain and Heart are afflicted, so that one Symptom comes to be heaped upon another.

Frider.
Hofm. m.
m. lib. 1.
cap. 13.

XXXIII. In judging of diseases much is attributed to the pulse; which being weak and small, for the most part death is threatned; but if on the contrary big and full, there is hopes of reco-

very. Yet I have seen one that was corpulent and a great drinker; whose pulse, while he lay languishing in bed, was so little and small, that being hardly to be perceived by the Physician one would have been apt to think death at hand, unless his rubicund Face, his Eyes, Teeth and full Veins had gaind: Wherefore inquiring more diligently into the cause of so great a malady, I believed it to be caused by too great saturity and abundance of Blood, and that no fitter remedy could be used than a speedy Bleeding. But his relations and friends were against it, for fear such a remedy might make the Man die the sooner: But at my instance, and assurance that he would certainly recover if it should be done, at length they consented. Wherefore presently calling a Surgeon he was let Blood, and forthwith both his pulse and strength returned, so that his recovery was quicker than his death, which seemed to be at the door, was believed to have ensued.

Beneven.
abdit. c. 69.

XXXIV. Whether is Blood to be let sometimes when the Spirits languish? I think the difficulty is to be determin'd by a distinction. For the humours either abound, or are moderate: The latter case does by no means admit of Bleeding; But when the humours abound, though they may neither distend the Vessels nor burst them, nor overwhelm the natural heat; yet because they oppress the feeble strength, so much of them may be diminished by Bleeding, as that Nature may easily govern the remainder, so that no humour may putrefie or be corrupted. But though Authors determine thus, yet it is later to extract that which exceeds (unless the disease be very violent) by abstinence and a spare diet. ¶ We must presently abstain from Bleeding because the faculties seem in some sort weak: For the faculties may do so two manner of ways; one, while they suffer nothing as yet in their proper essence; another, when their essence suffers, which it does by oppression or dissolution, &c. The faculties are said to be strong, or weak, absolutely, or *secundum quid*, accordingly as both the carnos and spirituous substance, wherein they inhere, is duly constituted, or something is deficient.

Mercat. l.
1. de pra-
sid. c. 2.

These things being premised, we may conclude that weakness of the faculties or strength hinders not Venesection, as they are weak *secundum quid*, as is proved in a constitution that is very lean, yet with no small abundance of Blood, wherein the strength languisheth in respect of the carnos substance: An instance whereof we have in *Galen* of a Woman that was cured, 6. *Epid.* 3. 29. So likewise the oppressed faculties, when they suffer nothing in their own Nature, are very much helped by Bleeding: On which account *Hippocr.* 4. de vict. acut. and *Galen* *ibid.* think that if an healthful person lose his speech all of a sudden from the intercepting and shutting up of the Veins, he ought to be let Blood forthwith.

Horat. Au-
gen. l. 4. de
curat. per f.
m. cap. 2. &
lib. 3. cap.
14.

XXXV. Whether is Bleeding profitable in a Flux of the Belly? *Hippocrates* says 4. *Acut.* n. 116. If you would Bleed any one with profit, his Belly must first be strengthened. In which place *Galen* says, You shall not take away Blood in a flux of the Belly: For if the flux continue after the Bleeding, it dejects the strength. And this opinion he confirms *Art. Curat.* ad *Glauc.* 14. If a Fever happen with a Looseness, there is no need of other evacuation, but that is sufficient of it self, though it be not in respect to the Plethora: And whosoever shall venture either to Bleed or Purge such, as if they needed greater evacuation, precipitate their Patients into more grievous mischiefs. But who will deny that the Guts are of the same nature with the Stomach to which they are continued? And if this, as *Galen* teacheth 7. *m. m.* be subject to all sorts of intemperies, what incongruity is it that the Guts should be subject to the same?

Greg.
Horst. qu.
6.

same? Every part of the Body is afflicted sometimes with an hot, sometimes a cold, moist or dry *Intemperies*, or one compounded manifoldly of these, and shall the Guts remain untouched and unviolated by them? If so, it follows that the Symptoms of every disease attend upon their disease: But amongst the Symptoms of all diseases the commonest is the fault of the function or faculty. Now there is a manifold function of the Intestines, as of other parts, to wit, of attracting, retaining, concocting, expelling; all which are necessarily hurt by what *intemperies* soever the Guts are afflicted with, and that more or less according to the distemper they are affected with, sometimes one function more and another less; and therefore if it happen that the retentive faculty is injured by an hot intemperature (which happens oftener than by a cold) what hinders why we should not remedy this affection by Bleeding, as we would do the same from a like cause in any other part of the Body? Do the Guts want Vessels by which they should be subjected to a defluxion of humours? Do they not also suffer inflammations and Gangrenes from an afflux of humours? Are they not sometimes full of hot and vellicating Ulcers? Are they not afflicted with bitter pains when they are exercised with a Dysentery? As to *Galen's* argument, it ought not to be put in the controversy, that by the continuance of the Flux the strength wasts, and that by so much the more if Blood were let forth superfluously, or Purging were used; but is the decay of strength owing only to Bleeding or Purging in case of a Loosness? Is not the same thing caused by a Fever? Or does not any notable pain the same? You will say, not so easily; seeing the strength is not so quickly exhausted by these wherein there is observed no notable evacuation, as by a flux of the Belly. But what can you say in fluxes of Blood out of the Nose, Womb, Hemorrhoids, Lungs, Stomach, &c. In the cure whereof Blood is advised to be let by skilful and vulgar Physicians? You will reply, that only revulsive Bleeding is granted in those cases, and only a little quantity is taken, to the end namely, that a passage being made in an opposite part for the Blood that is in motion, it may cease to flow thither whither it was a going. For the very same reason I also say, that Blood is to be let out of the Arm in a flux of the Belly raised from an hot intemperature which has always an efflux of humour attending it, that an exit being provided for it in another part, and part of it drawn forth, the remainder may cease to run and burthen the part which it had begun to possess: And so the humour being partly lessened, and partly called back to another part, the *intemperies* that was the cause of the flux must in all likelihood become less: And this being lessened, it is necessary that that should also decline with it which was affected by the same cause, viz. the superfluous dejection of the Belly.

Let us confirm our assertion by Examples. A bilious Bloody dysentery (with excoriation) with a Fever and a very great provocation to Stool, had so, for a whole month almost, afflicted *Polemarchus Brixianus*, that there was little hope of his life; yet he was so relieved by taking six ounces of Blood out of the left Arm, that it proved a present remedy, seeing on that very day all the harms begun to decline evidently, and he was in a short while restored to perfect health. 2. In the same kind of disease, with a swelling of the Spleen, ten ounces of Blood being taken did wonderfully help, and recover the Wife of N. 3. Gripping and a Fever grievously tormented Mr. N. for three days, on the fourth being Bled to ten ounces the distempers so slackned, that the next day they went off quite. 4. N. was grievously and dangerously ill of a Fever and a dysentery

with excoriation, by which being almost killed, when another Physician had Purged him several times with Rhubarb, on the twentieth day I let him Blood to ten ounces with manifest relief: two days after I Purged him with Senna and Syrup of Roses solutive, which Medicin took away the remainder of the malady. 5. Mr. N's. Cook was first taken with a very fore Fever, and the next day with a notable Dysentery: I presently order'd him to be Bled in the right Arm to about fifteen ounces, after which he was more at ease, and the day following both distempers went off. 6. Bleeding proved also a wonderful help to Mr. N. who was brought to extream leanness by a long and strong Fever with a flux of his Belly that was sometimes Lienterical, sometimes Dysenterical, sometimes of another sort, and sometimes mixt: He had been frequently Purged with Rhubarb, had taken Diureticks, had used Astringent fomentations, Anointings, &c. I proposed Bleeding: His Physician wondring at the novelty of the remedy, presently alledged his Flux, loathing of meat, weakness, extream leanness, a tabid Fever, and the little hopes there was of a recovery: Yet upon my advice a Vein was opened in his right Arm, and about nine ounces of very putrid Blood taken away. After six days, because he was notably bettered by the first Bleeding, we opened a Vein in the other Arm, and after ten days more Bled him a third time. Thus after a few days he was quite cured. 7. A Fever and a Loosness, as well by their continuance as vehemence, had left N's. Servant nothing but Skin and Bone in the Siege of *Rechel*: I recovered him by letting him Blood three times, eight ounces at a time, and Purging him with Senna and Syrup of Roses solutive. 8. A very troublesome flux came upon a putrid *Synocha*, sometimes in the form of a *Diarrhoea*, and sometimes of a Dysentery: upon the tenth day the Fever not abating, both distempers were taken away by Bleeding twice on the eleventh day. But seeming to grow worse again upon repeated Purging, letting that alone I betook my self to Bleeding only, which I used twice again: Upon the first Bleeding he was a great deal better, but upon the second quite well. 9. A considerable Lientery had afflicted Mr. N's. Servant for eight days, from which he was very manifestly relieved by Bleeding of him, and the next day quite cured by a decoction of Senna with a little of the infusion of Rhubarb. 10. A Man of seventy years of Age being troubled with a *Diarrhoea*, for eight days, and being afraid of Bleeding because of his Age, I prescribed him an infusion of Rhubarb, which doing him no good, he was at length recovered by Bleeding. Now as I reckon Bleeding the principal cause of the recovery of all these and very many others, that by God's blessing I have recovered of various and grievous fluxes of the Belly, as well new as old, as well with a Fever as without it: So on the contrary I think the death of many ought to be refer'd to the want of the said remedy, &c.

¶ *Galen* (6. *Epid. sect. 3. comm. 29.*) cured a Woman that was very much wasted and had lost her appetite, and had long labour'd under a suppression of her Terms, by very large and repeated Bleeding. Imitating *Hippocrates* who 5. *Epid. num. 2.* cured a Consumptive person of an extream leanness, that could not be helped by any sort of Medicin, by Bleeding him in both Arms even till he was become Bloodless: These were followed by *Benevenius* (l. de *abdit. cap. 44.*) and *Epiphanius Ferdinandus* (hist. 69.) The former restored a Woman to her former health, that having her Terms suppress'd for a year was become nothing but skin and bone, by repeated Bleeding. The latter recovered another from a Catarrh complicated with an Hectick Fever, also by the help of Bleeding.

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Leon. Bor-
tal. lib. de
curat. per
f. m. cap. 5.

In these, seeing the wasting and leanness were owing to a vitious Blood, that was black, Melancholick, and unfit for nutrition, that Blood was to be taken away, that fresh and such as would nourish might supply its place: For the parts do not attract to them naughty Blood, but refuse it; just as people that are an hungry refuse meat offered them that is ungrateful to the taste, even though it be put to their Mouths: The parts likewise are delighted only with semblable and familiar aliment. *Avicen* indeed 4. 1. cap. 20. does greatly forbid Phlebotomy in bodies that are very lean; but he is to be understood of such a leanness as arises from defect, to wit, from a want of Blood and Spirits: For such an one is cured by addition, not subtraction. On that account in Hectick and other marcid and tabick Fevers, Venesection is to be rejected, because such wasting and witheredness supposes want. Also a natural leanness and slenderness, which is the offspring of an hot and dry intemperature, the chief sign whereof is absence of fat, refuses Venesection, because in such the faculties are not strong: For the predominancy of heat, the looseness of the Pores, and the thinness of the Blood and Spirits make them apt to be enfeebled and grow faint upon Bleeding. Of these *Galen* speaks, 9. meth. 15. Those that are naturally lean, and of an hot and dry temperature, are greatly offended by evacuations.

XXXVI. Bleeding is prohibited by urgent Symptoms, as Pain, want of Sleep, and immoderate excretion; for these deject the strength. Likewise every immoderate Symptomatical evacuation, that dejects the strength, as also Critical (by the Nose, Womb) or Pleuritical forbid it. Those have little skill to do good, who seeing a drop or two of Blood drop from the Nose in burning Fevers, hoping for a Trophæe, cry out, That here is occasion for Phlebotomy: If the Hemorrhage be large, they do it more boldly, affirming Nature to be burthened. But hereby the Critical Motion of Nature is hindered. Others seeing bloody Spittle in a Pleurisie, urge bleeding; but the same is forbid by the Oracle, 6. Epid. 3. 44. A Pleurisie hinders bleeding in spitting of Blood, which is profitable in other kinds of spitting of Blood. An Hemorrhage of the Womb in a Pleurisie is esteemed by some as an indication for bleeding, by others an hindrance. *Cleomenes's* Wife being sick of a Pleurisie had her Terms flow plentifully on the fourth Day, by which she was so much relieved, that all her Pain, Cough, and difficulty of Breathing ceased upon it. Others distinguish: If the time for the flowing of the Terms be at hand, Venesection is permitted; if shortly expected, and the Disease be urgent, Blood is to be let first in the Feet, and then in the Arms.

Rolinc.

meth. gen.

lib. 4. sect.

2. cap. 8.

idem ibid.

XXXVII. Pain forbids Bleeding, because it weakens. Yet if a great Inflammation be joined with the Pain, it is rather commanded, according to *Galen*, 1. Aph. 23. Otherwise it is hurtful, as in a Cardialgia or gnawing Pain at the Stomach that dejects the faculties, 1. ad Glau. Cap. 14. In the Pain of the Kidneys, and Colick, from Wind, Bleeding is good, not *per se* or properly, but by accident, that the matter in the Veins being lessened, the Kidneys and Colon may not be so easily inflamed and pressed with a Phlegmon. Add hereto, that by opening a Vein the flux of other parts is sometimes lessened, through the communion that these have with the whole Body, and because of the thinness of the Spirits, which may be carried through all the narrow passages. Wherefore *Hippocrates*, 2. Epid. 5. feared not to flie to bleeding in a pain raised from *Flatus*; for, says he, Venesection cures Flatusities. Yet in this Disease, as also in a great Nephritick pain, I know many Physicians that

have practis'd Physick a long time, who having been much against bleeding their Patients tormented with pain, when their Patients have been bled at their own desire, have plainly seen how far they were from the right. Botal. c. 9.

XXXVIII. By Venesection there seems to be a retiring of the Blood from the circumference to the centre, 1. Because to avoid a vacuum the fluxile humours do necessarily tend towards the Centre to fill up the place of the evacuated Blood. 2. Hence the external parts look pale and cold after Venesection. 3. Often the Inflammation of some Internal part is increased. 4. *Galen* (4. de tu. San. Cap. 10. & 11.) intimates this, where he advises that the Body should not be replenished presently after Venesection, lest the Veins snatch crude juices to themselves. 5. *Avicen* does therefore not open a Vein in those who are bit by a Serpent, before the Poison be dispersed, lest it tend inwards: On the same account he forbids bleeding after the small Pox are come out. Thus he determines that the same does stop a looseness, because it first draws from the lesser Veins to the Cava, from which consequently the Blood is let out by Venesection. On the contrary, nothing is of more constant Practice, than when the humours, especially the Bloody, flow to the internal parts, to make a revulsion to the external by opening a Vein, 1. In asmuch as the Veins that are emptied draw from those which are fuller, and the fuller afford their help, and being loaded with plenty do readily deposite their burthen into the empty Veins, the fluidness of the humours not a little assisting. 2. In an inflammation of the Liver, Lungs, or Pleura, *Hippocrates* and *Galen* bid us open a Vein in the Arm, to revel from the internal parts, to the external. 3. And therefore (1. de vult. acur.) that in a Pleurisie Blood is to be let so long till by its colour we can discover that to come which was flown to the part affected. 4. How should there often be a strong revulsion, if there were always a fresh afflux from the circumference? 5. Why does *Galen* (4. de tu. San. C. 3.) dissuade bleeding to those in whom crude and vitious humours possess the internal parts? For a further clearing of the matter, *Sylvat. (contr. 37.)* notes, that in letting of Blood it is to be supposed that there is in the Veins a plenty of Blood, either convenient, or not. If there be a greater plenty than is agreeable to Nature, when Blood is withdrawn by Venesection, there ensues not a vacuum; but the Veins subside, as we see to happen in a Leather Bottle or Bladder when part of the Liquor is poured out. Hence it is concluded, that in Venesection the Blood is compelled to retire to the centre, if the Veins that are in that place be deprived of their Natural quantity of Blood, either in whole or in part; but it will return back again to the circumference, either because it flows from the Bulk of the Body out of the neighbouring Spaces into the Veins; or because the Veins that are next to it are emptied, some part of that which is contained in the Veins succeeding that which is evacuated. To the Arguments 'tis answered; to the first, The consequent is denied, because when the Blood is diminished, the Veins coincide of their own accord. To the second, There is not always a paleness, but when there is, it happens through too large evacuation, fear, recourse of the Spirits to the Heart, &c. To the third, An internal Phlegmon is sometimes increased, not by reason of the Blood that is let, but through a new afflux, which would afflict more grievously if a revulsion were neglected. To the fourth, 'Tis granted, because the abounding cacochymy in the first ways is first to be taken away, that vitious Blood may not be generated afresh. To the fifth, *Avicen's* Reasons rather prove the contrary: For because Poison is inimicus to Nature, therefore at first

first we must take diligent heed that the Motion of Nature to expel the Poision be not hindered by Venesection. But when it is dispersed in the Body, it is lessened by even a plentiful bleeding; Namely, if there be an indicant for Bleeding, that so part of the Vitious Blood being taken away, that which remains may be the sooner dissolved. Thus also the expulsion of the small Pox is not to be hindered by another Motion of the Blood, which Venesection may do; as it is likewise granted in a Flux of the Belly.

Horst.
Inst. med.
disput. 18.
7. 7.

XXXIX. Those Physicians err, who following Galen open a Vein in any Flux of the Belly in an opposite or most remote part, for revulsion: For I will affirm, that when Blood flows immoderately and Symptomatically, to bleed further is besides Hippocrates's intention, who for revulsion of the Blood flowing immoderately to the Womb, bids us affix Cupping-glasses to each Breast, but forbids taking any Blood away (2. de mor. mul. vers. 36.) And if by such evacuation the sick be observed not to be notably hurt, because we take away but a little Blood, yet I think they reap little or no profit thereby. For what good do we think can the letting forth two or three Ounces of Blood do, for revelling the Blood that is rushing into any part? Which evacuation hardly makes a motion in the Blood. Therefore because the strength will not bear so large a Bleeding as might possibly make a revulsion, and a small does no good; therefore Hippocrates thought it better to abstain from Bleeding, and to flee to other remedies. You will object, that lib. de steril. vers. 422. he bids a Woman to be Bled who doth not conceive, when the mouth of her Womb gapes, and by consequence her Terms flow more plentifully? I Answer, That is another case, for the Terms flow not so plentifully, as that it can be called a flux; nor is there that weakness as will not admit a moderate Venesection; which he commands not for the sake of the menstrual flux, but for the cure of Barrenness. You will object again, that 1. de humor. and 1. de morb. he opens a Vein in them that spit Blood. I Answer, His intention is not to make a Revulsion of the Blood that is flowing, but to take away the Plenitude which may hinder the closing of the broken Vessel, and to avert the imminent inflammation of the Ulcer: For he opens a Vein in spitting of Blood no less when some Vein being pulled asunder pours forth a little and blackish Blood, than when the Blood flows hastily and plentifully out of a bursten Vessel. He plainly shews his meaning by adding, And let him use a diet that may make him very dry and Bloodless. Which words make it apparent that he opens not a Vein for Revulsions sake, to hinder the course of the flowing Blood.

Martian.
consim. in
versic. 36.
1. 2. de
morb. mul.

XL. Whether can Bleeding be helpful to the too cold of constitution? Galen 1. de rigor. &c. says, In a disease which requires heating, none have dared to bleed. And 5. meth. c. 6. But if there be none of these things, but it be winter, or the climate be naturally cold, and the person also himself be of a colder constitution, by Bleeding in such a case the whole Body is both greatly cooled, and there happen some Symptoms that lead to a dangerous Refrigeration. If the coldness of the climate or season hinder Bleeding, much more does a cold intemperies; seeing the Blood does not only afford nourishment to the Body, but the natural heat also is sustained and continued by it. Yet 8. meth. 4. he bids us bleed hastily in an Ephemera from obstruction of the skin, which the external cold often causes. Reason persuades the same, because obstruction hinders transpiration, from this ariseth a redundancy of the multitude of the humours, from which proceed obstruction and putrefaction. But we must thus distinguish the matter: If the distemper we would cure be cold, as if, for example,

any labour under a cold intemperies, he must use hot things only, and abstain from Bleeding which is a cooling remedy. But if the disease be hot, and Refrigeration be only as an antecedent cause, while we extinguish the Fever by Bleeding we shall do no harm: for the procatactick cause has no indication belonging to it. Yet when refrigeration hurteth even the Viscera, Bleeding is most Vallet. of all to be shunn'd. ¶ Those things which are contr. 1. 7. alleged against Bleeding, are only to be under- c. 6. stood of that which is made for evacuations sake; and make us take heed that by letting Blood there follow not a crudity of cold humours; and intimate that the quantity is to be moderated. Add hereto that the Authors of approved medicin have often practis'd Venesection in diseases meerly cold; as in a Dropick, from the retention of some usual evacuation, Hippocr. 4. acut. 11. For when the heat is suffocated by Blood that is too cold through its plenty, Bleeding is a present remedy. Likewise in palpitation, a cold disease, lib. de rigore, &c. c. 5. In a Priapism, 14. meth. c. 7. In a suffocation by cold Water, Dioscor. 1. 6. c. 4. Paul. lib. 5. cap. 66. Zacut. princ. med. hist. 8. l. 2. In stubborn diseases proceeding from a cold cause, to abstain altogether or more than is meet from Bleeding, is not the part of a prudent Physician; seeing 'tis certain that every part of the Body is nourished by that matter which is in the Veins: Which the colder and thicker it is, by so much the more grievous and stubborn does it make the distemper that is raised from the like matter: Which matter we say is to be diminished partly by Bleeding, de f. m. partly by Purging and an attenuating diet; that cap. 12. the Mass of Blood being cleansed and renewed, the disease may be cured.

XLI. Others proceed further who in all Fevers let forth the harmless Blood, excepting neither the spotted Fever, nor the Plague, nor Poision: Thus freeing themselves of much labour and trouble, which otherwise the many sorts of Fevers would create them. But because the nature of poison and malignant humours chiefly consists in this, that they forthwith set upon the heart, and quickly deject the strength of the most robust; and seeing Bleeding does both likewise, not only diminish the strength, but also draw the malignity to the Heart, and impells that back again to the oppression of Nature which she had driven forth for her own easement; I cannot but pray and admonish all Artists, that they will not proceed to Venesection either in the Plague, or other malignant Fevers, or also in all those accidents whereby men are Poison'd inwardly or outwardly, especially if they love and seriously aim at tranquillity of mind, and the health of the Patient that desires their help. The French, Italian, Spaniards, and Portuguese, those fierce contenders for Venesection will reply to me, that Nature by Venesection draws Air as it were, and is unloaded in some manner, that she may so much the more easily cast forth the remaining malignity: And this seems true, for the Blood draws the Air, that its Spirits may the more readily fly away, and it may be eased of those faculties that it necessarily wants. When these things are finished, the Patient changes life for death, and very well knows how to draw tears from the Eyes of the by-standers. Giving no other reasons they do moreover rely upon their experience; but I wish they relied well upon it, for I have found such Patients, who in the morning were in no danger, after Bleeding five or six ounces taken away in the evening by cold and rigid death. Hence therefore we may rightly gather what it is they name Experience, namely, If the Patient by chance escape, the honour is given to Venesection; but if he die, as he does commonly, there was malignity in the case. Therefore I oppose experience

L. Botal.
de f. m.
cap. 12.

experience to experience, thanking God greatly that he hath exhibited and demonstrated a far certain and better remedy to all those, who rightly consider diseases without envy, passion or being enslaved to another's opinion. Others that they might seem more moderate in this matter, admit of Venesection in the beginning of the disease, before the malignity manifest itself externally; and herein I will readily assent to them, if it be done, 1. In hot Countries. 2. In a full Body. 3. When the humours ascending to the head cause grievous accidents there. In such a case I think Bleeding in the Arm or Foot will do a great deal of good. But those who will prescribe Venesection in all Bodies, and without difference in these cold and moist Countries, such shall certainly find no good success thereof. Yea they can hardly give a reason which will be received by art as genuine; especially seeing themselves do freely and ingenuously confess, that they sometimes meet with such cases wherein they dare not order Bleeding which they cry up so much, performing the cure to their desire by Sudoriferous and cooling potions.

Barbette
Chirurg.
part. 1.
cap. XI.

XLII. Avicen. Fen. 4. l. 1. c. 29. Bleeding often causes a Fever, and many times putrefaction. Venesection through the ebullition of the Spirits causes diurnal Fevers, and if it be too large, by debilitating Nature causes putrefaction, the innate heat being weakened: it generates an Heetick, if it be done in Bodies wanting Blood, the lean, hot, dry. A weakly man being in no disease caused himself to be Bled in the midst of Summer; being lean and weak he begun to be Feverish thereupon, and complaining of an inflammation in his Liver, the Physician not considering his weakness, nor thinking upon Coolers and Purgers that were then necessary, Bleeds him more than once: Whereupon the Blood (wherein heat has its perseverance) being evacuated, his flesh wasted, and he died of a tabid Fever.

Zacut.
prax. ad-
mir. lib. 3.
obs. 53.

XLIII. When there is occasion for repeated Bleeding, whether ought the second to be larger than the first? Galen l. 4. de sanit. tuend. seems to make the second larger: But l. de venæ sectione he bids us add half the quantity the second time. Which many understand so, as that only half as much is to be let forth as was before; but I think he means as much, and half as much more: Namely if six ounces were taken the first time, then nine are to be taken the second: Though there is a contrary place, lib. de venæ sectione c. 17. where Galen took three pound the first time, and after an hour one pound: But there, as I suppose, the case was so urgent as to compel him to take more the first time. Yet the matter is thus to be weighed, namely, That where nothing hinders, and necessity is not very urgent, it is better to begin with a small quantity, especially when we have not experienced the strength of the Patient: But when we have and find it consenting, when necessity urges, we must take more the first time, notwithstanding Galen's saying who bids us add half the second time.

Mercat. de
presid. lib.
1. cap. 2.

XLIV. I suspect whether change of the colour should be respected in Bleeding; for at what time the Blood is a flowing, 'tis hard to observe such a change of colour; and when it is already run out, it is not so profitable to look upon it; seeing often when one has been let Blood twice or thrice, that which is hid in the deepest *minera* of the putrefaction, is drawn out in the last place, yet in but a small quantity, so that it can do little good, and the Patient cannot without harm sustain further Bleeding though never so necessary. So that I think that measure of the quantity to be surer, which is chiefly taken from the benefiting and sustaining: And though there do not presently appear any benefit, yet the

sustaining has this excellency, that if the remedy be used according to art, it promises benefit, and endures repetition till the disease be overcome. Mercat. de
Pres. l. 1.
c. 2.
Physicians use to receive the Blood into three Porringers; when they observe a discolouring in the last, and see it very impure, and dare not continue the Bleeding till it come forth pure for fear of fainting away, they declare that the Patient must Bleed again, not once, but three or four times: And they are confirm'd in this opinion when they see a glutinous surface in the Porringer, that is clammy and tough: But this measure is deceitful, for that is esteemed for discoloured Blood, which is Blood mixt with chyle; the glutinous surface is chylous.

Rolfinc.
meth. gen.
l. 4. sect. 2.
c. 10.

XLV. One would at first think that the measure of the quantity of Bleeding should be, till we have taken away all abundance; but we may not do so: for there is one thing which I think I have observed, viz. That there has been an excess made, when so much Blood has been let forth, that the left ventricle of the Heart could no longer drive it into the Body, nor the Blood come from thence to the right ventricle of the Heart.

Walrus
meth. med.
p. 78.

XLVI. There are some cases wherein it is expedient to cause fainting away by evacuation: For in very great inflammations, in the most burning Fevers and most vehement pains, the Ancients, as Galen reports, used to make evacuation to that degree: Nor indeed as if Lipothymy were to be the measure of the greatest evacuation, as the common opinion is; for this measure would have been very deceitful, seeing some faint away upon the least occasion, and others endure immoderate evacuations without swooning: But rather because in the aforesaid cases Lipothymy comes on a proper account; for hereby is a retraction made of the Blood and Spirits to the viscera, whence there is caused the greatest revulsion from the part affected: the habit of the Body likewise is very much cooled, and a torpor is induced upon the senses. I have observed this benefit in pains, so that I cannot sufficiently set forth how notably it takes them away. A noble Woman being troubled with very violent pains in her Head, and all things that were given her doing her no good, the pain at length came to that height, that through the greatness of it she fell into a swoon, out of which being got in a little time, she was freed from all sense of pain, and continued in that state till the same pain returning caused a new swooning, which proved the cure of the pain. Hence I perceived the reason why the Ancients in the greatest pains made evacuations to fainting away: For Hippocrates also in the Pleurisie (4. acut. v. 241.) hath commended it, If the pain reach to the Clavicle or Collar-bone, &c. and it be acute, we must Bleed even to swooning; Not exclusively, as some interpret, but inclusively, for he says, If the pain be acute, we must Bleed even to swooning: Hence it appears that swooning is procured because of the violence of the pain, that it may take the pain away. Seeing therefore swooning, even without immoderate evacuation, happens in all cases in which it is approved of; it will not be necessary to administer an evacuation in that manner, lest the Patient before a great evacuation be made, faint away, as Galen observed. Yea he is sometimes to be placed so as that even by a moderate evacuation he may fall into a swoon, namely when 'tis feared that the sick either through age or some other great cause cannot bear a large one; and that we shall obtain if he be Bled either standing or sitting.

XLVII. As I never make those numerous Bleedings which proceed to fifteen or twenty: So this I will premise, that there is hardly any disease whose cure I do not begin with Venesection, because if that be not used in the first place, there

is scarce place for any remedy; For a full Body neither makes the ways permeable for other evacuations, nor affords it a passage for any medicines; what is cooled is condensed, what is heated is inflamed; such a Body is fit for no way of cure: Therefore it is so far to be evacuated, as that it may sustain the remainder of the cure without prejudice, but not so far as that the faculty may not suffice afterwards, or the Body incur the before rehearsed prejudices.

Vallef. m.
m. l. 4. c. 2.

XLVIII. The habit of the Body affords but a deceitful token of the measure of Bleeding; wherefore we must be the more attentive to the strength of the faculties, and to the Veins themselves, from which the strength of the faculties is more manifest than from the habit it self of the Body. This indeed *Celsus* has taught us to examine; for if the Veins be large, and the habit also fat and loaded, such Bodies bear Bleeding more easily: But if the Veins be small, though the Bodies be slender, yet they bear this kind of evacuation more difficultly.

Mercat. de
Jud. med.
l. 1. c. 4.

XLIX. 'Tis certain that Bleeding is profitable against a *Plethora*, whether already compleat, or but a beginning; for the mischiefs of a *Plethora* cannot be better taken away or prevented by any other remedy. Yet we should avoid the necessity of this evacuation as much as we may, namely because the Blood becomes thereby more sulphureous and less salt, and therefore almost all persons are apt thereupon to fall into Fevers, and to grow fat. Moreover Venesection being a great remedy, if it be prostituted to every little occasion, it will become less effectual when there is need to use it for great diseases. To which this may be added, that, according to the observation of the vulgar, the more familiarly any one uses Phlebotomy, the oftner he shall need it; because Blood being often let to avoid a *Plethora*, the rest of the Mass will the sooner arise again to a *Plethora*, far otherwise than some think, who fear lest the store of the Blood should be wasted by Venesection, seeing on the contrary by this means its quantity becomes larger, though its crasis be worse: For thus the Blood being spoiled of its balsamick salt, and of its salt that preserves it from putrefaction, is instead thereof saturated with a fatning and more pyretick Sulphur.

Willif.
posth. oper.
sect. 3. c. 1.

L. An error of no small moment is committed within moderate bounds, whilst in some cases Blood is let with too sparing, and in others with too liberal an hand. In a burning Fever, Pleurisie, Inflammation of the Lungs, Apoplexy and other great diseases, arising from a turgescence or phlegmonous incursion of Blood, to Bleed too sparingly does always more hurt than good: For besides that it takes not away the antecedent cause of the disease, viz. the *Plethora*, it does moreover cause the conjunct cause, viz. the inflammation or irruption of the Blood, to be increased. For it is a constant observation, that by letting Blood too sparingly, its whole mass does forthwith effervesce more notably, and has new rushings into the part affected. The reason whereof is, that in a great *Plethora* many portions of both the Blood and Serum being thrust into recesses and straits are compelled to reside there, which after the Vessels are a little emptied, regurgitate impetuously into the mass of Blood, and do very much exagitate it and drive it very violently hither and thither: Wherefore even in this regard 'tis necessary the Vessels should be very much emptied, namely, that besides the freeing of the Blood from the straits there may be space granted to the humour returning from banishment, which otherwise being not so congruous to the Blood causes a tumult, and raises it into effervescences and eruptions. Hence we may note that almost all men presently grow hotter after Bleeding, who yet if

there were a sufficient evacuation of the Blood, are more temperate afterwards.

Willif.

LI. *Galen* (*de cur. rat. per f. m. c. 13.*) determines that Old Age does not forbid Venesection: You shall open a Vein in men of Seventy, says he, if the disease require it, if there be the aforesaid Pulses: For there are some even of this Age that have much Blood and are brisk; as there are others dry, and of little Blood, and that are apt to wither and shrivel upon opening a Vein in any part. Wherefore you shall not only have regard to the number of years, which some do, but also to the habit of the Body: For there are some that cannot indure Bleeding at Sixty, whereas there are others that can bear it at Seventy; however you shall take less from these, though they seem to have the same affection as a young flourishing Body. Thus far *Galen*. If therefore a brisk Old Man be afflicted with a Pleurisie, Peripneumony, a burning Fever or the like diseases, there is no doubt but he may and ought to be let Blood, seeing without that remedy such diseases can hardly ever be cured: And if they are not able to indure the remedies, they must necessarily perish, and so all diseases should be mortal in Old Men. I have seen a Man of Seventy three years of Age let Blood four times in three days, and there were at least thirty ounces of Blood taken from him. *Rhases* also let a decrepit Man Blood that was afflicted with a grievous Pleurisie. ¶ That elegant passage of *Celsus* (*de erat.*) is to be produced here: "The Ancients thought infancy and Old Age could not bear this kind of remedy; but it matters not what the Age is, but what the strength is: Therefore if a young Man be weak, 'tis bad to let him Blood; for the strength that remained decays and is snatched away hereby: But a lusty Boy, and a hearty brisk Old Man do safely admit of Bleeding: But an unskilful Physician may be very much deceived in these things, because commonly those Ages have but little strength. ¶ I knew a Woman that had so accustomed her self to Bleeding, that she was glad to be let Blood yearly in the Spring, or else she could not be well: And she kept this custom to the Eightieth year of her Age, bearing it very well; but such are very rarely to be found."

Primirof.
error. po-
pul. l. 4.
c. 23.

Trincavel.
l. 2. c. 10.
Praef.

LII. Nor is this kind of remedy to be feared in tender Age, if the disease be great; for I have Bled a Boy of Ten years old, very ill of a Pleurisie, in the *Salvatella* of the same side, who by the next day at even was freed from his distemper and perfectly recovered. The like remedy I have used in other Children in the Quinsy, induced thereunto both by reason and experience, having sometimes seen Children of four or five Years of Age Bleed a pound of Blood through a wound by a stone, knife, or some other instrument; and particularly one that Bled a great deal through an Artery cut in the Temporal Muscle, whom yet I cured, as I have done several others, without any detriment to the waxing faculty; yea I know some of them alive still that are strong, fat and fleshy: So that in diseases where there is danger of life, and an indication for Bleeding present, we should not be afraid of this remedy. ¶ But the boldness of a young Surgeon of Paris exceeds all belief: When I practis'd Physick at *Neuenburgh* in *Switzerland*, but upon occasion was out of the City, a fat little Boy, of a very good constitution, seven weeks old, but whom any one would have thought to be a year old, was taken with a cruel Pleurisie: The signs whereof were, a violent Cough, an acute Fever, and when he was laid down in his Cradle or born in ones Arms, if he were touched never so lightly on his right side, after having coughed a little he would cry very vehemently, with difficulty of breathing:

Marchett.
observat.
36.

I say a rash, but successful Surgeon applies two Leeches to the Bending of the right Arm, and therewith took away about two ounces of Blood, which remedy was of that efficacy that the Child was quite cured the same day of his very dangerous distemper. But though Bleeding have proved well once or twice through the strength of the Patients, yet it ought not to be drawn into Example: Colder Climates do not admit it at all, nor does it always succeed well in the hotter, as saith *Victor Trincavella de cur. affect. l. 2. c. 20.* who relates how at *Venice* and *Padua* some Physicians opened a Vein in tender Infants, but that always a bad success attended. Wherefore prudence is greatly necessary here, if in any case.

LIII. Idiosyncrasie or the singular property of each one's nature make some to endure any Bleeding well, and others neither such as is large, nor indifferent; yea some are afraid and discouraged by the very mentioning of it, especially such as otherwise are apt to swoon. *Galen l. aph. 23.* makes mention of these. Some have been observed when there was the greatest necessity of Bleeding, upon the thinking of the operation, to tremble in their Limbs, not to know what they did; being bid to stretch forth their Arm, they have drawn it in; and on the contrary, being bid to turn away their Eyes, they have done otherwise; so that those who stood by were forced to put a Cap or Hat before their Face, and the matter has hardly been done without their fainting away: This is connatural to the *Dukes de Biron in France*: The Duke de Biron Marechal of France, lying ill of a burning Fever, yielding at last to be Bled with much persuasion, swooned away, though a person used to War, and very famous for Royal victories. A noble *Hamphobus* (or dreader of Bleeding) consented to be Bled, which was terrible to him by an Hereditary succession of his Family: His Blood scarce saw the light, but a swooning coming on deceived the hopes of his Physicians that it would do him no harm.

Guern.
Rolfinc.
meth. gen.
nar. l. 4.
sect. 2. c. 4.

LIV. He that would determine the quantity of Blood that is to be let, is bound to consider the Country, or the sign of the strength, and plenitude of the Body. In hot Countries that are near to the Meridian, large Bleeding is not so well born as in middle climates. The French, especially in *Paris*, bleed very largely: *Riolanus (l. de circul. c. 26.)* defends this prodigality. In diseases from a Plethora, and continual acute, putrid burning Fevers, he determines that we ought not to spare, but that half of the Blood in the Body may be let forth in fifteen days time. *Scamotus* says he, without pitying the sick, and detesting the Physician, read in *Platerus's* observations, Histories of Patients that have been scorched with burning Fevers without Venesection. And he thinks that those who have escaped in such case, have recovered health, not by the help of their Physician, but by means of their Fate. In the small Pox, Measles, spotted Fevers, they think that Bleeding does not retard, hinder or avert the excretion: In other grievous diseases and full of danger, as the Apoplexy, Phrensie, Pleurisie, Joint-Gout, Foot-Gout, &c. they are hardly in Heroick Venesections. Colder Countries that are nearer the North seem not to bear such large evacuations of the Blood so well, whether the Fevers be acute continual, or intermitting. Experience has taught, that when by the advice of French Physicians the excellent Duke de Longueville, the French General, and *Panner* the Swedish General encamping in the middle of Summer ann. 1640, by the City of *Salsfeld* in *Duringen* (a Country in upper Saxony) when these illustrious persons I say were Bled largely, it did not answer desire. Though plentiful Bleedings may be confirmed in our Coasts

by the portentous instances of spontaneous Hemorrhages; one being noted by *Rulandus* that Bled ten pound in a days time; and another by *T. Durnus (miscel. med. c. 11.)* who being but ten years old, in a double Tertian Bled fifteen pound within the space of one Month, and yet both of them recovered. But it is safer not to rely on these Examples, but to use a mediocrity. It is not from the purpose to add what *Zacutus* (in his Book of observations) delivers concerning the Blood of the Spaniards and Germans, being very worthy our knowledge and notice: That in the Bodies of the Spaniards there abounds a thick, succulent and compact Blood, so that if they be taken with a continual Fever, and not Bled freely, they all die: On the contrary the Bodies of the Germans are full of a crude watry Blood, that is not very firm. If the Blood that is taken from a Spaniard in a Fever be fluid, and watry, and do not coagulate, it is a certain token, known even by the most ignorant, that such a one will die, because the fibres of the Blood are corrupted and dissolved: But in Germany, not only in malignant diseases, but also in those that are more slight and less dangerous, a fluid and watry Blood is void of all danger. From whence it comes to pass that the Germans cannot so well endure Bleeding, especially if more large, because their Blood is less spirituous, seeing experience is witness that if a Vein be opened in a state of health, only for prevention, often even while the Blood is yet a running, they fall into great Lipothymies, and the same is much more to be feared in continual Fevers. The nature of the Italians differs not much from the constitution of the Spaniards; but the complexion of the French is fiery, whence they have need of greater ventilation by Venesection.

Rolfinc.
meth. gen.
l. 4. sect. 2.
c. 11.

LV. Letting of Blood may breed a custom: Thus the Ethiopians, who use often to scarifie their forehead, their forehead itches when Blood is redundant: As likewise do the shoulder-blade and arm in those who have been used to be scarified or Bled in those parts. For the emptied part draws from the whole, and nature endeavours to unburthen her self by that part which uses to be opened.

LVI. Whether is letting of Blood to be omitted in the state and vigour of a disease? In diseases whose motions are sudden and swift, and which are of a more rugged and fierce nature, we must speedily make use of the most effectual remedies, wherefore a larger bleeding is convenient in these even at the first time. A moderate one is also profitable in the beginning of other diseases, for which it may seem good at other seasons of them, as in a Tertian Ague. Nor is it only good in the beginning, but in the increase of diseases; but not indiscriminately in all diseases, nor at all times; for there is no need of it in every slight inflammation, or pain, or every small disease that would terminate in health, if left to itself. Nor is it reasonable to believe, that if it be good to open a Vein in the beginning for a pain in the side, throat or eyes, that it is so also to do it in the first invasion of the chilliness of a Tertian Ague, &c. or other disease that gives truce; but it will be soon enough if it be done after the first, second, or even third fit. Therefore it was rightly said of *Galen (l. de curat. pers. m. c. 23.)* That the number of days is not to be attended, as some have writ; yea on what day soever you shall find in the Patient indications for Bleeding, use that remedy thereon, though it be even the twentieth day from the beginning. And *G. m. m. c. 5.* he says likewise, That Blood may be let at any time, but the sooner the better. That it is profitable in the augment as none doubts, so does scarce any admit it to be good in the state and vigour; but this is contrary to the last opinion of

A. Thoner.
obs. 33. lib.
1.

Galen,

Galen, and against reason, seeing it is very often found most profitable at that time, especially in those diseases in which is observed so great strength, that their end is held to be doubtful. As for my self, I am not only not afraid to let Blood in the Vehemence of a disease, when *exanthemata* have broken or are a breaking forth; but neither am I so in burning Fevers or *Synochæ*, in which there appear neither *Exanthemata*, nor *Parotides*, nor droppings of Blood at the Nose, nor any thing else besides the greatness of the Fever. Yet I know that *Celsus* does very evidently detest it, and also deny that it ought to be done after the first or second day. Which last as it is true, when it is fitly referred to those diseases of which *Celsus* there treats, which are those which strangle, wherein there is hardly any hope of retrieving the Patient, if the strangling be not manifestly got off before the third day; so is that generally manifestly false when he says, *But in case of a violent Fever, to Bleed in its very impetus is to cut a Mans throat, therefore a remission is to be expected.* I confess indeed, if we know there will be a remission, as we see in intermittents, or indeed in continual that come towards the nature of intermittents, a remission ought to be expected, although I never knew it do harm even then, but rather good. I know that I deliver a Paradox; but do not however depart from the reason of the thing it self, but only from the received opinions of Physicians, which as I formerly entertained as true, so by practice and experience I find, and by reason evince them to be either simply false, or for the greatest part departing from truth: Seeing it is certain that Febrile, yea all other morbus *impetus* (or vigors of diseases) can by no other remedy be so easily lessened, weakened and extinguished, as by the very thing from which they use to receive help at their beginning: And from what do they receive greater help than from this, whereby *Galen* confesses that he has often destroyed these impetuous Fevers? If you say that *Galen* has not commanded it in the very vigour of the disease, this will be harder for you to prove, than the contrary for me, seeing he says that as it were by a miracle the fevers were extinguish'd in many a little after, to wit, on the very same day or on the following; which I have also often observ'd. Now this so sudden evacuation of the reliques by sweat had not been, if the disease had been in its beginning, in which the matter is unfit for a natural expulsion: But in those, in whom the reliques of the disease are expelled by a natural evacuation three or four days after the letting of Blood, as in those from whom *Galen* in the cited place says he took Blood on the second or third day, who on the seventh were freed by plentiful sweat, as in a Slave and a Free-man, of whom *Galen* makes mention *lib. 6. m. c. 4.* I say in those, Blood was let in the beginning or augment of the disease; but in others in whom a Crisis follow'd the next day after, or on the very same day, I suppose it to be done, as the foresaid reason teacheth, in the very *impetus* or height and constancy or fixtneſs of the disease, wherein if the end seem suspected, it is safer to assist nature by the help only of Bleeding, and not by Purging, which indeed I always do when I order my Patients my self alone: But where I observe signs of health, though I see great invasions of the Fever, I commit the whole combat to Nature; for I have found by experience that that of *Galen 3. de Crif. c. 2.* is most true: *For no little perturbation in the Patients precedes Critical excretions, seeing some breath difficultly are delirious, &c. whence you may often observe those that sit by them, and unexperienced Physicians to have no more hopes of them than of those who are sentenced to death in the Court.* An experienced Physician only can dis-

tinguish the difference of these, seeing these very bad symptoms precede both deadly and healthful Crises alike: Therefore only the prudent Physician can rightly discern when in the said *impetus* 'tis fit to assist nature, and when to let her alone. But if you ask what is best to be done in a doubtful case, namely when we can hardly distinguish an healthful struggling from an unhealthful, Whether is it better to abstain from Bleeding, or to use it? Certainly 'tis safer to use it, because it will do no harm to him that is about to recover, and it may perhaps preserve him that otherwise would die; nor by doing so (if you offend not in other things) shall you act contrary to *Hippocrates's aph. 20. 1. What things are judged, &c.* And at what time can you do it more opportunely (if a better occasion be slight) than while nature is in her extreme conflict, in which if she be conquered, there remains no further hope of escaping? There is no reason therefore that we should be moved by the opinion of *Celsus*, that was a more eloquent Author than learned Physician, which opinion he presently extenuates, and that rightly, when he adds, *If it do not decrease, but have ceased to increase, and there be no remission hoped, then also, though it be worse, yet that only occasion is not to be omitted.* In this place verily *Celsus* shews himself to be rather a Rhetorician than Physician: For if it be to cut the throat of a Patient, to open a Vein while a Fever is violent, how then does he advise it to be done if the Fever do not decrease? For what can there happen worse to a Person in a Fever than to be stabb'd by that which is in the place of a Remedy; or if he think that it may be sometimes profitable in that case, why said he so absolutely, *to cut a Mans throat*? Moreover if in a notable Fever wherein there is no remission hoped for, the only opportunity of Bleeding be while it is in its state and vigour, (which he means when he says *if it do not decrease, but have ceased to increase*) how is this occasion worse? For these things seem to imply a contradiction. Therefore I conclude with *Celsus* himself, that Blood ought to be let in the very state and *impetus* or height of the Fever, if there be no remission hoped for therein, which I do against the opinion of vulgar Physicians, that have in their mouth continually *aph. 20. 1. What things are judged, &c.*

I have therefore on this occasion let Blood in many, even in the greatest *impetus* of the disease, as in Mr. N. who was ill of a continual, violent Fever, but somewhat of kin to a Tertian, with very grievous Choleric vomitings in the very time of the exacerbation. Being called to him but on the fifth day about noon, at which time his Fever was very dangerously high, fearing lest his continuing to strain to Vomit without bringing up any thing might break some inward Vein, or some inflammation might invade the agitated parts, or the restless straining to Vomit and the Fever might so grow upon him that afterwards there might be no place for remedies; I therefore order him to Bleed presently to fifteen ounces, which remedy proved so seasonable and effectual that the provocation to Vomit ceased even while the Blood was a running, and the fever abated, and declining by degrees was quite cured on the seventh day. I did thus not only on the day of the exacerbation, but also in the very hour of the greatest affliction. The like I did in the siege of *Rachel* in many up and down in the Army; that were ill of a very violent and greatly putrid Fever, yea that was somewhat pestilential: Of all which Patients of mine not one died that used Venesection.

Wherefore

Wherefore, to return, I say again, that Bleeding is a most effectual remedy when the disease is urgent, where the end is suspected. Whither belongeth that of Celsus lib. 2. c. 10. *Blood ought to be let when any one is strangled with a Quinsie, and when the foregoing fit of an Ague almost killed the Patient, and 'tis probable the next may be as bad, and the strength of the Patient seems not able to sustain it.* Which ought to be understood both of an intermitting, and continual Fever that has exacerbations, for this ought to be done in both, and in any other disease (save where there are no hopes of recovery) wherein there is greater suspicion that it will grow to a greater height, than decline. And that is the whole time of the vigor or state, according to Physicians, whilst the disease for some space of time seems to maintain an equal combat with the strength of the Body; not but that it is either increased in it felt, or in some regard diminished, but it is unknown to us.

LVII. And shall this remedy be thought unprofitable in the declensions of diseases? Some have thought it to be so, for this reason, That nature can overcome the residue that is left, if she could lessen that which was greater, in the state of the disease. That indeed has for the most part been observed, yet often also it is false according to that of Hippocrates, *Those things which are left in diseases, use to cause relapses.* Some say here that these reliques of diseases ought not to be taken away by Bleeding, but Purging; but I am of the contrary opinion, namely rather the former way than the latter, yet not in all diseases, but in very many. See the reasons §. 29. of this chapter.

Leon Bo-
tal. l. de
cur. per f.
m. c. 22.

LVIII. If it happen that there be a great necessity for Bleeding, but the strength be very languid from the beginning of the disease to the very state, and Bleeding were neglected at the beginning, What is to be done in such a case? We must know that before all things the feebleness of the strength is to be consider'd, whether it arise from oppression, or from resolution. If the strength be oppressed, seeing it suffers nothing in its own nature, we must not omit to Bleed, though we did omit it in the beginning. On which account Hippocrates 4. de rat. viſt. in Acut. and Galen in commentar. admonish us to let Blood in the case of the intercepting of the Blood and shutting of the Veins. But if the strength be resolved and suffer as to 'tis essence, I had rather with Sennerius (de febr.) follow Galen in this case, who persuades us to omit those remedies that may cast down the strength of the Body and get the Physician an ill fame, and to use prognosticks, rather than by a doubtful remedy to take away the remainders of the strength with the life: For it is contrary to all method of cure, to exhaust more the vital spirits which are already exhausted: And we consult more for the dignity of Physick, if in such a case we insist upon comforting things and expect a convenient time for Venesection.

Hofman.
m. m. l. 1.
c. 13.

LIX. In the progress of diseases, especially Fevers, that there is no place for Venesection is determin'd by Foubertus. 1. Because of aphor. 23. 2. *In the beginning of diseases if any thing seem to be moved, move it then,* which Galen also understands of Phlebotomy. 2. There is no place for it where Purging is most required; but seeing as the disease proceeds, the febrile intemperies does daily corrupt the Blood, and seeing it makes it feculent, serous and ill coloured, it becomes clear that purging is rather required. 3. The strength being brought down by such a taint of the Blood and the continuance of the disease, does dissuade from it. And let us suppose that the tainted or infected Blood is also evacuated by Venesection, yet this will not be with fruit, because the good Blood is diminished with the offending humours.

On the contrary Gaudinus often Bleeds in the progress of the disease. 1. Because the Cacochymy which a febrile intemperies introduceth upon the Blood (when the Fever is vigorous) has always a preternatural heat, which is not only alter'd by Venesection, but a good part also of the offending matter evacuated. 2. As often as the faults of crudity shew themselves, and there are new putrefactions, if the Patient be not very weak, Blood is conveniently taken away: And though in the progress of the disease it be done a second or a third time, it is neither unseasonable nor unreasonable. 3. Is it not true in all Venesection that all things are moved inwards, all places are made more open, and all the humours better scattered, which things are of great moment for the cure of Fevers? 4. If for the sake of a Cacochymy Blood be withdrawn in the beginning, why not also in the progress of the disease? These things being laid down, Gaudinus concludes, that in each Plethora (the mother of Fevers) if the strength consent, 'tis profitable in the beginning of the disease to withdraw that which is shut up in the coction of the Blood, and that not once, but a Second and a Third time, more largely in that Plethora which is such with respect to the Vessels, more sparingly in the other which is burthen-some and offensive to the strength: and in both again more sparingly in the augment of the disease, and more largely on the first days thereof. And a little after: Seeing there are many kinds of Cacochymy, Purging is a proper and an accommodate remedy for them all, whereby the impurity is withdrawn and evacuated sooner and more easily, or slower and more hardly, accordingly as the parts of the body are situated: Yet in a Cacochymy of the Veins, Blood is let for many reasons; yet so as that what is not drawn forth by Venesection, be drawn forth by Purging. Here I will only mention a febrile Cacochymy, which is far more profitably taken away by Bleeding again and again, than by Purging; because either all of it is drawn forth, or at least whilst we have drained a great part of the impurity and vitiated matter, Nature will the more easily concoct, put to flight and drive forth the remainder; or being concocted, will rather commit it to the Physician to be driven forth. To Foubertus's reasons I answer, 1. To the Aphorism, *In the beginning of diseases, if any thing seem to be moved, move it then,* &c. That it admits of its limitation, inasmuch as such a beginning only is particularly understood, where the matter is turgent: Whereas otherwise the augment may seem fitter for evacuation. To the Second, It does not follow that where Purging is required, there is no place at all for Bleeding: This is clear if we consider a Cacochymy in the Veins. To the Third, Respect ought always to be had to the strength, which may be often sufficient in the progress of the disease. To the Fourth, Doubtless there is greater benefit from a large evacuation of the corrupt Blood which partakes of a natural extinguishing quality, than harm from withdrawing out of the Veins a small quantity of that which is pure; because this latter will soon be made up again, as soon as the other is drained forth, which through its impurity does not only spoil nutrition, but by degrees will vitiate and corrupt that which is pure.

Greg.
Horst Inst.
med. disp.
18. qu. 22.

LX. If in the middle of a disease, or even in the beginning, Blood begin to flow out of the Womb, Physicians lay so great stress upon the benefit of that region, that though it flow out of the usual time, merely Symptomatically, they dare not use any other evacuation, which may chiefly stay that fluxion: Whence it comes to pass that in the cure of acute diseases they often incur great danger by such scruple: As when in the beginning of a Pleurisie, or Peripneumony,

or

or burning Fever the Terms begin to flow, there are few who do not let slip the opportunity of letting Blood, out of a Vein; or if in any acute Disease they dare do it, they do it in the Foot; induced; as I suppose, by the benefits of that region, and being affrighted by the dangers that are wont to happen upon the suppression of the Terms. But it doth not become Artists to receive any matter so indistinctly. That evacuation of Blood by the Womb which is natural, is indeed profitable unto Women in many regards, and is generally suppressed with great prejudice: Yet that evacuation is not alwayes made with a like benefit, and therefore neither is it stopt alwayes with the same danger: But the like happens commonly in this, as in other Evacuations; If they be made well, they are good; if ill, bad. We must therefore consider, not only from whence the Blood flows, but whether it flow seasonably, that is, whether at that time when there may be made a Crisis of the Disease, and when the Terms us'd to flow; or whether at neither of these times, but while the Disease is yet crude, and the Month is not yet quite come about; or whether it be come about, but the Disease is not ripe for a Crisis; or whether it be ripe for a Crisis, but the Month is not yet come about. For if the first happen, you may esteem the evacuation to be very seasonable, and that the mensrual evacuation of the Body and solution of the Disease have happily jump't upon the same time: You shall therefore give way to such an evacuation, if it be made entirely; if not, you shall help it by all means: Therefore you shall open no Vein, or if you do, it must be in the Leg; but make no other evacuation. But if the evacuation be seasonable in neither regard, then matter it not, but let Blood where and as much as the Disease requires, abating only so much of the quantity, as you think may be supplied by the fluxion that casually happens. Therefore if it be a Pleurisie, let Blood out of the Arm of the same side, not mattering though it flow out of the Womb: For seeing that Disease is urgent, it requires to be soon taken away, but it does not require to be cured by so unseasonable an evacuation: It is the convenience of the region alone that seems to require it; but that is of no great moment when so many conditions gain say it: 'Twill be sufficient that this evacuation be not stay'd on this account by the use of astringents; you shall therefore abstain from these, but let Blood from whence the Disease requires. If that evacuation come before the usual day of the Month, and yet happen fitly for a Crisis of the Disease, the rule of seasonable Crisis shall be observed; If the flux be large enough, to let it alone; if not, to help it, but upon no account to hinder it, nor to divert to another place, or to attempt another evacuation: And if it be unseasonable for the Disease, but come at the due time of the Month, if so be the Disease be indifferent to upper or lower evacuations, as suppose the Stone in the Kidneys; or be without any certain seat, as a Fever; Blood shall be let out of the Leg, if there be need to let it: But if the Disease require evacuation by the upper Parts, and be urgent, the Physician may let it alternately, both above and below; and while he lets it above, to retain it below by some art, as by Bands, or Cupping-glasses, or otherwise, &c.

Vallef. m. m.
l. 2. c. 13.

LXI. A Vein is not to be opened in the time of the mensrual Purgation, lest we hinder or precipitate the motion of Nature: But this is to be understood only on condition that natural evacuation exceed not nor come short of the due measure, either simply, or with respect to the urgency of the Disease: For if the Blood burst forth in too great quantity, then it may be safely let out of the Veins of the Arm. Moreover if there then happen any grievous Disease that requires a sudden evacuation,

and presses the upper Parts, it may be let out of the upper Parts, as in a cruel Pleurisie, or a suffocating Quinsie: For if then you let Blood out of the Foot, or expect the motion of Nature, that that may suffice the *Plethora*, or the acuteness of the Disease, the Patient will die before that tedious evacuation can do any good: Wherefore regard being had to the more urgent Malady we must let Blood out of the upper and nearer part, Cupping-glasses being first set upon the Thighs, or the Legs being rubbed, or Blood being let out of the Foot, that both Indications may be satisfied. Again if the mensrual Purgation be too little, and reflaginate to the upper Parts, and Spitting or Vomiting of Blood follow, 'tis the safest to open the Veins of the Foot, according to *apbor. 5. 32.* Besides, if the mensrual Blood actually flowing be not proportionable to the *Plethora*, how can we supply that imperfect motion but by Venesection? which *Galen 9. Meth. 5.* teacheth. For though, when the Disease is placid, mild, and accompanied with good signs, it be unlawful in the flowing of the Terms, rashly to disturb Nature's motion; yet if it be not perfect, nor proportionable to the *Plethora*, we must compleat it, lest by delaying the Remedy the Disease obtain an increase.

Zacut. Prax.
hist. lib. 3.
cap. 9.

LXII. The *Vena Porta* contains a Cacochymie in a morbus Body, which 'tis doubtful whether it be safe to empty by a manifold Venesection, lest the Blood flowing back into the larger Veins appointed for the circulation, infect the whole mass of Blood. ¶ Lest the impurity of the first ways be drawn into the Veins by Bleeding, that ought first to be removed: but this danger attends not all letting of Blood, but only that which is plentiful according to the custome of the Ancients.

Riolan. En-
chir. Ana-
tom.

LXIII. If the strength permits not the opening of a Vein in the Arm, *Avicen* says that the Forehead Vein is to be opened in the Phrensie; out of which, as being less, Blood flows in a less quantity, whence there is less loss and dissipation of the Spirits. This document is to be observed not only in the Phrensie, but also in any long Disease; so that if the strength be not very robust, 'tis safer to open the lesser Veins. Wherefore Practitioners are not to be found fault with, who in long Diseases open the *Salvatella*.

Capivacc.
cap. de Phre-
nit.

LXIV. Yet it is to be noted, that it is better that a little Blood be drawn forth at several times, than that much be evacuated all at once: The reason is, because there have been often observed notable harms, yea death it self to have come upon letting forth a great deal of Blood at once, never from taking a less quantity of the same, though by repeated Bleedings there were at length the same quantity extracted.

Franc. de le
Boë Sylv.
prax. l. 3.
c. 4. §. 107.

LXV. Those who think in Venesection that Nature if she be strong, does alwayes send forth the vitious Blood, and retain the good; because they see that in venesection made to fainting, the Blood that is first sent forth separates into parts, but that which comes out last abides alwayes one and the same; those I say are deceived: for the reason why the latter Blood separates not, is not because it is good, but because it issues drop by drop, and spurts not out of the Vein so vigorously as the former: both of them consists both of good and bad Humours.

Walaeus m.
m. p. 34.

LXVI. Those erre who prescribe fasting and venesection at once; for this cannot be done without the great damage and danger of the Patient. For *Galen* has admonished us that the Sick are more hurt by undue and unseasonable evacuations, than helped by convenient and seasonable, because of the resolution of the strength that succeeds those evacuations. Now those are undue and unseasonable, which are made use of after fasting: as *Galen* has declared in his Book of Venesection against the *Erasistratians* that lived at Rome. Nor

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hinders it that *Hippocrates lib. de vict. acut.* prescribes fasting after venesection; for he does not mean an abstinence for several days, but only for a few hours after Bleeding. Now we mean that fasting which continues for one day or more without any meat at all, or a longer time with a little: And in these there is neither place for Bleeding nor purging.

Aug. Ferrer.
castig. cap.
18.

LXVII. In Bleeding there often happens a swooning or fainting away, which uses to cause greater fear in those who are present, yea in Physicians that are young Practitioners, than harm to the Patient. Yet this happens not through the fault of the Artift, but the softness of the Patients mind, which too readily disturbs the Spirits in the Body, and almost ties them up, when he seems to be giving up the Ghost as it were: yet this is prevented with a little to do, namely if the Patient lye along, and hold some liquor, as suppose Water or Wine, in his Mouth, whilst the Vein is cut and the Blood flows out. If he faint notwithstanding, stopping the Blood by laying your thumb upon the orifice, sprinkle his face presently with cold water; if the fainting continue, pinch his nose also; and when the fainting is over, taking off your thumb, let as much Blood be taken as seems good to the prudent Artift; and cease not to bleed, as the over fearful use often to do. If the fainting take him as he sits, we must help it the same way as it might have been prevented: let him presently lye along upon his Bed, or be gently laid down upon the floor, sprinkling his face with cold water as is before said, for the Artift may easily be aware of its coming if he look upon the Patients face or observe his pulse; for that looks pale, and this varies its beating. But as it is easily perceived, and raised on so slight an occasion; so the Patient is neither dissolved, nor is it difficult to restore him to his former senses; though in its coming it bring in some frightful jactations of the whole Body, evolutions of the Eye-lids and Lips and other like things, which yet soon vanish: which is not done in that swooning that follows upon superfluous evacuations.

Leon. Botallus
de modo
incidendi
venæ § 20.

LXVIII. It is usual for skilful Physicians, when there is need of both purging and Bleeding, if the Patient be afraid of the one (though it were fit to be first done) to use the other. In which matter the opinion of *Paulus* and *Oribasius* is to be taken warily, as also *Galen's* 12. method. and one is not rashly to be substituted for the other. These teach, That if any be not bled because he is afraid of it, &c. we must evacuate the plenty of matter either by Urine, or by unlocking the passages, or lenise and cool the Fever, or purge more largely by stool. Which opinion is very contrary to the rules of physick: inasmuch as whilst Blood is redundant in Fevers, we may not lessen it by purging, nor by urine or sweat; for such things would be hurtful when the *plethora* is not first taken away, with the evacuation whereof *Galen* always begins. Nor can fear excuse, nor cause that such things as will hurt may not hurt, whilst there is a plenitude in the Body: for if we purge, we leave an equal quantity of Blood: if we provoke sweat or urine, we take never the more from the plenitude: Unless we thus expound *Galen's* viz. That when Blood is not let in the first days of a Disease, it by and by degenerates into other Humours which must be purged: But this advice of *Galen* is not so to be understood, as if we should purge at the same time we ought to bleed. For in Fevers 'tis needful both to purge, and provoke sweat and Urine; but one cannot be done in the room and season of another: Wherefore the Patient is to be forced to bleed but if he cannot be brought to it, having pronounced the danger of neglect, 'tis safer for cooling of the Fever to satisfy the indication in some measure with Leeches and Cupping-glasses with scarification; and if he will not admit of these, then 'tis best to go away and do nothing at all. But in other Di-

seases, where the necessity of one or other is equal, we must perform that which the Patient shall choose: but unless you use either purging or Bleeding first, we cannot provoke sweat or urine without hurt; for those do not excuse the necessity of purging or Bleeding. But in such as are let Blood for a pain, fall or blow, we may safely provoke sweat instead of Bleeding, which Nature of her own accord uses to do with great relief. But when there is need of both Remedies and the Patient refuseth both, the difficulty is greater: we must then follow *Aëtius's* counsel l. 3. f. 4. c. 17. Some are so fearful and extremely soft, that they cannot endure the name of either Bleeding or Purging: It were not only better, but also more fortunate, never to meet with any such: And yet if we be forced to take care of such Patients, we ought to predict that they will be long troubled with pains, watchings, rackings of the Joints, especially if the influx of the Blood be thick and much. Therefore abstinence is to be enjoined, indifferent from Clysters are to be injected; things are to be applied to the Navel, and when the Belly is loosened, we must use discussing ointments and frictions, &c.

Mercat. libid.
cap. 7.

Galen 4. de san. tuend. c. 4. says thus: If any either through age or fearfulness will by no means yield to be bled, the same must be more largely purged; or if he be afraid of that also, what is superfluous must be drawn forth some other way. From which it is clear, that where the Disease requires Bleeding, if the strength cannot bear it, or because of age or for some other reason we may not undertake it, then we must use purging which may evacuate Choler, Melancholy and Phlegm: for 'tis better that Blood alone should superabound, than that the other Humours should do so as well as it; And moreover part of the plenitude is taken away by purging, and the Humours are more readily ventilated. But if the Disease depend both on a *plethora* and *Cacochymie*, for this the Belly is to be purged more freely than it would need if we had leave to open a vein, namely that purging alone may supply the place of both evacuations.

Zacut. Pr.
Hist. p. 569.

¶ If phlebotomie cannot be made, whether can purgation alone, or sparseness of Diet, or exercise, frictions or sweating supply its place? I believe its place may be supplied if there be no Fever present, especially by such things as exhaust the Serum out of the Veins: for by this means the Veins being emptied, the rest of the Body may be extenuated; and this foreign Nations do, which are afraid of Bleeding.

Riolan in
Erich. Au-
gen. tom. 1.
Epistol. p.
77.

LXIX. Two things hinder a *Cacochymie* from being easily taken away by purging; The one, when the Body is not liquid and fit for expulsion; The other, when the noxious Humour tends not at all towards the ways of purging. That Body is not liquid, wherein the noxious Humour is immoderately thick or viscid and not at all fluxile, or wherein there is so great an obstruction of the Liver or lower Veins, that there is hardly a way open by which the Humour can be derived out of the Veins by the Belly: In such case therefore the noxious Humour that is shut up is to be taken away by Venesection, lest being turgent there with fury as it were, and intercepted in the passages, it should break in upon some noble part and fasten it self there. The other impediment of purging a *Cacochymie* is, when the part affected is seated so far from the ways of purgation, that the noxious Humour cannot be dissolved and derived into them: in which event and condition of things a large and apparent Vein is directed, which shall be opened if the greatness of the Disease and symptom persuade. So if a phlegmatick distillation rushing upon the fauces or Lungs be like to suffocate, it is taken away by venesection.

Fernel lib.
ratione.
de vacuandi
ratione.

¶ 'Tis more convenient to use Bleeding before Purging, than this before that: for this loosens the wayes, which the Body needs very much in order

order to its being purged; the *other* weakens the strength, than which there is nothing more dangerous in order to bleeding. Again, impurity resists not bleeding, but repletion hinders purging. Therefore 'tis more unprofitable to let Blood that is already purged than before it was purged, unless it happen that by the purging there is raised a new heat in the *viscera* (which chiefly falls out when a sufficient bleeding did not precede) for then nothing is more adviseable than to bleed after purging. Otherwise when there is need of both evacuations, bleeding must precede for the *aforsaid* reasons. Whence again it comes to pass that bleeding alone does oftener perform the cure than purging alone, namely because that evacuation is the first in order: and it is more natural that that which is latter should succeed that which is first, than that which is first, that which is latter: Therefore upon bleeding, the Body is often Purged on Nature's own accord either by a Looseness, Vomit or Sweat following thereupon: But upon purging the Body there seldom uses to follow a flux of Blood, unless sometimes the *menstruous*, nay neither can the Body be well purged when the *channels* are full.

Vallef. m. m.
l. 2. c. 3.

¶ It is manifest indeed that in every kind of repletion of the Vessels, especially a Plethorick, if we first evacuate the Body by bleeding, the Purge that we give afterwards shall find the Veins and Passages of the Body not so filled and obstructed, but that its vertue, by the guidance of Nature, may penetrate through the whole bulk of the Body, and with great easiness bring forth the noxious Humours: But if the Vessels be filled with Blood or other Humours, and the Veins about the Liver and Mesenteric be obstructed, the Purge will cause intolerable Gripings, and Faintings, and will pull the Veins indeed; but draw nothing therefrom worth speaking of. Wherefore, *Hippocrates* in almost all acute Diseases (*q. acut.*) wherein the Humours are not turgent, in a Phlegmon and other internal Tumors and Apostems of the *viscera*, and in such Diseases as have all the Humours increased in an equal proportion, begins the cure with venesection, if the Strength and Age of the Patient give leave. But if only one of those Humours abound, or be putrefied, or there be but a small quantity of good Blood, and it be overcome by the plenty of other Humours, then he begins evacuation first with purging. In the discussion of this Controversie, we (with *Avicenna*) name those Purgers that purge electively, whose vertue is dispersed beyond the Liver, through the whole Body: But we do not reject the use of those which they call *Lenitives*, and Clysters made of them and of a Decoction of Medicines that open Obstructions and incide viscous Humours; I say we do not reject the use of these before bleeding and purging, for washing away the filth of the Stomach and Intestins, lest the vertue of the Purger be destroyed thereby, and lest for avoiding *vacuum* they enter the Veins emptied by Phlebotomy, that the obstructed passages of the Veins of the Mesenteric may be also opened by these. Yet the right administration of all these things depends on the conjectural Judgment of the Prudent Physician.

Joh. Langius
Ep. 17. l. 1.

¶ What we have said of Bleeding before Purging has place chiefly when the Disease to be cured is urgent, and there is danger in delay. But when there is nothing urgent, and the Physician has time enough to do by degrees all that is requisite, 'tis no great matter where he begins the cure, whether with Bleeding, or Purging and evacuating the offending Humours, though I am of opinion, unless peculiar reasons dissuade, that 'tis always safer to begin the cure with Bleeding, as often as there is occasion for letting it forth also; I say unless peculiar reasons dissuade: Thus when the *Air is wet and moist*, as 'tis safer and more convenient then to Purge than Bleed, so Purging shall be used in the first

place: And on the contrary, when the weather is fair, Bleeding is performed with better success; on which account the more Prudent Physicians wish and observe fair weather for venesection. So as often as much Phlegm and Choler abound in the Body, and there is therefore greater need of Purging than Bleeding, 'tis better then to premise Purging, and that indeed more than once, before a Vein be opened, because it is not supposed that the Blood abounds then so much as other Humours.

Sylv. de le
Boc. Prax.
l. 3. c. 4.

LXX. If there be a fault in the Humours (as is usual) from a mixture of a Plenitude and a Caco-chymie, it requires very mature advice as being a very difficult case. The first thing to be consider'd is the difference of the Humours that are collected in the Veins; for when either *Plethora* prevails, Blood shall be let largely till it be reduced to mediocrity; this one Remedy easily lightens and recreates the burthened strength or vital faculty without prejudice, nor is there then any occasion for Bleeding. But when the Veins are filled with an impure Blood, suppose the fault be from a mixture of a Plenitude and Caco-chymie, it requires both kinds of evacuation. Lastly, if the Blood that fills the Veins be too hot and mixt with much Choler, Blood is presently to be let, but more sparingly than in a simple *Plethora*, only so far as to prevent the dangers of Plenitude: And that which remains, requires to be driven forth, not by venesection, but Purging; which shall be done more safely after taking away some Blood, both because the Body is cooled by Bleeding, and also because the fear of encreasing the disturbance or obstruction is now taken away. See before, § 4, 5. of a Phlegmatick and Melancholick Plenitude. If (as we may see in Quotidian Agues and other Phlegmatick Diseases) necessity often cause us to let Blood, it is to be done sparingly and dividedly, as the strength and continuance of the Disease permit. Lastly, every Plenitude, defiled with the mixture of Phlegm, Choler or Melancholy, or some other Humour, does first indeed require Bleeding, but in such a quantity as the nature of the Caco-chymie shall permit; and then the Belly is to be loosened, that the noxious Humour that remains, may more fitly be purged off. But if there seem to be a great Caco-chymie, we must attentively examine whether a Fever be kindled by it, or not: for if there be, we must begin with Bleeding without delay, and put off Purging, till there be occasion for it, viz. when there has been Concoction (unless the Humours be turgent:). If not, we may bleed indeed, (if there be a Plenitude, though but small) but we must Purge the more largely and quickly. Lastly, the less Blood is to be let, by how much the Caco-chymie prevails, because in that constitution of the Body and Disease the vital faculty uses not to be so firm: on which account, unless the Veins be full above measure, and great danger be impendent, or the case happen to be as we have said, a slight Purging shall supply the place of bleeding, and that often repeated, especially if the Patient be afraid of being bled. But if it happen that a Plenitude and Caco-chymie be equal, we must not, as some think, begin indifferently with either purging or bleeding, but in such case it will be fit to consider whether this Plenitude of the Vessels cause Obstruction, which requires that venesection should precede upon a double account; both because we must take away such obstructions before Purging, which in the case put shall be more conveniently done by Bleeding; and also, because this obstruction hinders Purging Medicines: for whilst the obstruction and plenitude remain, the vertue of the Medicine cannot penetrate, especially seeing a purging Medicine does both by its heat and attractive faculty exagitate the Humours and disturb the Body; which when it is Plethorick, falls into greater danger, whereby it comes to pass that

that Bleeding ought by all means to precede, *Galen* affirming the same *l. 2. ad Glauc. c. ult.* who bids us begin with that without which we cannot safely perform the other. Nor is this enough as yet, but we must also consider whether a Fever arise from such Plenitude and Cacoehymie, for this gives us a more certain hint that we should bleed first, unless some of those things which *Galen* reckons up gain-say; for when the Plenitude is diminished, whatsoever putrid, or otherwise tainted Humours remain, we may the more easily afterwards draw them forth by a convenient Region: But in others, while the faults of both are equal, and there is no Fever present, it will not be improper to begin with either, so long as one is not more the cause of the Disease than the other, for in such case we must begin the cure at the greater cause of the Disease.

*Merret. de
Præsid. lib. 1.
c. 7.*

LXXI. The sooner we bleed the better, and therefore there is the chief and greatest occasion for it in the beginning: wherefore those erre greatly who always begin their cures with Purging, and take great care to use it before bleeding from any light suspicion of crudities. Indeed 'tis most certain that the abundance of crude Humours in the Belly is an impediment for bleeding, because they are snatched from thence by the newly emptied Veins, and being snatched, either by lighting into narrow passages they cause obstructions of the *viscera*, or being carried into wider they fill the whole Body with crudities and vitiate the Blood, or cause both: and doubtless these ought to be concocted or evacuated before bleeding. For which reason, believing that the Belly can be cleared of crudities no other way, they Purge always before venesection; whereas *Hippocrates* (*l. de vict. acut. 41. & 4. 36.*) thought that in a manifest satiety it was enough to pass one day without eating, or to use a Clyster: whence all others almost now adays take always care to empty the Guts by a Clyster an hour or two before bleeding, namely lest the thin parts of the *fecies* should be derived into the Blood and taint it. Which though it be more tolerable than while the Vessels are yet full, to disturb the whole Body by Purging; yet besides that it is undertaken to no purpose save where the Guts appear manifestly full and there is a sense of weight in them, it is not without harm, and sometimes such as is very great: For many being not sufficiently evacuated by the Medicine newly taken; the Belly is disturbed in the very bleeding, and they faint away unseasonably, so that the bleeding is hindered and the faculties very much weakened. Wherefore I use no such Clyster, unless when there is a peculiar and manifest necessity thereof, as when any of the aforesaid things is present; and if I be to use it, I cause it to be administered, not near the bleeding, but a long time before; namely that the motion which it raises may first have been layed, especially seeing bleeding it self uses to move the Humours of the Body, which often are carried of their own accord into the Belly: Which motion being added to the former which the Clyster had raised, becomes too great, and before the bleeding is ended brings the said dangers. Wherefore I think it far more adviseable, where the weakness of the faculty hinders not, to use a Clyster presently after bleeding, that, when the bleeding has been managed well, that which has been moved and agitated by it, may be drawn into the Intestins and evacuated by them: which we have often seen to succeed so well, that a man is evacuated and purged without taking a purging Medicine: But then let the faculty be firm, for if either the Guts be not manifestly burthened, or the faculty not very firm, I will use no Clyster neither before, nor after, contenting my self with bleeding alone that day.

*Vallesm. m.
lib. 4. cap. 2.*

LXXII. *Fernelius* gives good advice (*l. 2. de f. m. cap. 4.*) Nor do I after the manner of the unskillful presently command bleeding, if the Nose do but drop a little Blood, or the Urine look ruddy: for the Blood is apt to burst forth not only from Plenitude, and because Nature attempts that evacuation, but from many other causes. For such as have the mouths of the Veins eaten asunder, or in whom the viscera and especially the Liver is grown weak and scirrhus, often bleed at the Nose, as hydropical Persons use to do.

LXXIII. Some observe certain days to be unfortunate and unhappy both for purging and bleeding: But I have oft found by Experience that such observations are nothing worth: First, because the Heaven is an universal cause which acts not unless the particular causes be well disposed: Secondly, because Astrological Judgments are very uncertain, various, ambiguous and deluding those that make them, through the diversity of the nearest causes: Therefore 'tis rash to admit of an Astrological Judgment in a sick Person, when occasion is very urgent. ¶ Seeing the course of the Moon for the most part causes damages and detriments unto infirm Bodies, it may be brought into dispute, whether a Vein may be opened in that part, wherein the Moon abides? For most are fearful in this thing, nor dare they attempt any such thing, be the Disease never so urgent, and require such a Remedy never so speedily. But I think that it ought to be attempted maturely without trepidation and with great confidence of relief and driving away the Disease; for acute and swift Diseases admit of no truce or delay. Nor ought any one to be deterred or desist from his undertaking, though he attempt it while some Planet is adverse or malignant. Thus in a Pleurisie, Quinsie, Inflammation of the Lungs and Liver, neglecting the scrupulous Observation of the Stars and Aspect of the Planets, we must hasten maturely to venesection, even in that Part which the Moon is posses of.

*Hor. Augu.
de Venæ
Sect. l. 3.
c. 19.*

LXXIV. 'Tis ridiculous that some will let Blood only from seven till twelve: For says *Galen l. de sang. mis. c. 10.* Fear not to let Blood even in the night; yea on what day soever you find indications for bleeding, do it, though it be the Twentieth day from the beginning, if so be the faculty consent. And *cap. 11.* he bids us open a Vein at any hour of the day or night, if so be in Fevers or Agues it be done in the remission of the Paroxysms.

*Levin. Lentin.
l. de occ. Na-
tur. Mirac. 4.
c. 15. See
more in Arn.
de Villano-
va, Guido,
Joubertus,
Borallus, He-
urnius, Clau-
dinus, &c.*

LXXV. Though necessity urge, if the Patient have newly eaten, let bleeding be deferred a little till the fresh juice of the Viſuals be past into the Blood; for the Veins being emptied will snatch into themselves the Chyme that is not only crude, but oft incongruous and unproportionate to the Blood: whence not only its motion is disturb'd, but the vital flame also is sometimes in danger to be smother'd. I have known some that having been let Blood after drinking too freely of vinous Liquors, have fallen into terrible fainting Fits, that have lasted very long till the vital Spirit, being half overturned, hath recover'd it self again.

*Heurn. m. ad
Prax. l. 3.
c. 9.*

LXXVI. As soon as the quantity of the Blood to be let is resolv'd upon, then the next care ought to be, that by making a large orifice the same may flow out equally mixt in as little time as may be: for otherwise if it shall issue forth at a little hole, either drop by drop, or in a small thread, the mass of Blood fermenting will sever into Parts, and that which is subtil and more spirituous will spurt forth, the thicker and feculent part staying behind. Whence we may observe that if Blood be at any time let out of a large orifice with a full stream, and be stop't a little by laying ones finger upon the hole, and then be suffer'd to flow again a little after, the Blood that comes out at the second time will be far purer and brighter than that which came forth at first, namely because in the interval

Willis.

of

of the efflux the more subtil Particles being extricated out of the thicker and united together, have prepared themselves for flying out. Wherefore if Hippocrates's Precept, to let Blood till it change colour, be to be observed, we must see that it run out speedily with a full, and uninterrupted stream.

Idem.

LXXXVII. Why does bleeding by a large Orifice cool more than bleeding by a strait, when the quantity of the Blood that is let is equal? Because there is made a more sudden change in the Body when the Blood is poured forth by a large hole: namely because there is a greater withdrawing of the Blood that is a returning to the Heart, whence there ensues a less influx of Blood from the Heart into the whole Body, and hence all the Parts are cooled. Add hereunto that the quick withdrawing of Blood is followed by a sad sensation in the heart, and from thence with a straitness thereof, likewise with a less effervescence of the Blood, its expansion being hindered, all which things lessen the heat in the Heart and the whole Body. Moreover by a quick and hasty evacuation of Blood transpiration is more promoted than by a slow. Whence conclude, that Venesection by a large orifice cools more, not because thicker Blood is then poured forth, but because it flows forth quickly: For the Blood that is poured forth by a narrow orifice is as thick as that which issues out by a large, (seeing none will deny that all the Blood is percolated through the capillary Veins; wherefore the orifice can never be so small, but its width will exceed that of the capillary Veins) only it comes out more slowly, which is common also to that which is more thin. I wonder that those who think otherwise have not observed in their Hypothesis, that the thinner Blood is the more hot, which therefore if it were let out by a strait orifice, and the thick retained, the Body should be more cooled, than when the thick and less hot is poured forth.

Fr. Bayle
Probl. 3.

LXXXVIII. Those who let Blood should observe the situation of the Valves, for the Vein ought to be opened a good way from them: for if it be opened just by a Valve, the Blood either does not flow out rightly, or not at all, yea sometimes there rises a bump from clotted Blood.

Challov. de
Orig & Met.
Sang.

LXXXIX. Have a care you open not a Vein near its Anastomosis with an Artery; for if this be done, the Blood being all of a scarlet-colour will spurt forth impetuously, and its efflux is not easily stayed, nor is the orifice of the vessel soon shut.

Willis.

LXXX. If when we have occasion to bleed, the Vein do not appear, a large Cupping-glass with much flame is to be fixt upon the Part; and that will make the Vein shew itself.

LXXXI. Some esteem so much of the first time one is let Blood, that they will not use it but in great cases, because they think that, like an unusual and first Remedy, it may cure a man of great Diseases: whereas yet very skilful Physicians write on the contrary, that men suffer more by such things as they are unaccustomed to. Thus Galen 14. Meth. cap. 8. did not let an Old man Blood that had a hot Tumour upon his Tongue, because he had not been used to it. Therefore, say they, he that has been used to be let Blood, if so be his faculties be not as yet impaired by frequent evacuation, the same will bear it more chearfully and lightly than he that has not been so used. But the vulgar opinion seems to be justified by what Hippocrates writes 3. Aph. 28. of the first eruption of the Terms and the first Copulation: And says Celsus, (lib. 2. c. 1.) If any kinds of Diseases have happened in Infancy, and end neither when a Man comes to maturity, nor upon the first Coitions, nor in a Woman upon the first flowing of her Terms, the same are generally of long continuance: And speaking of the Epilepsie, If, says he, Remedies have not removed it, Coition in Boyes, and the flux of the Terms in

Girls does cure it. Pliny also says l. 8. c. 24. That many kinds of Diseases are cured upon the first coition, and upon the first flowing of the Terms: or if that do not happen, they are then of long continuance, and especially the Falling Sickness. Add hereto Hippocrates's authority, who 3. Epid. sect. 2. agr. 12. writing of a Maid of Larisa that labour'd under a sore Disease, says that it was judged (or ended) on the sixth day, and returned not again, which certainly was a rare and wonderful thing: But this he ascribes to her Terms which then broke of her for the first time; when she had the Fever, and it was now judged. Therefore that is not altogether vain which is vulgarly spoke of the first letting of Blood.

Rub. in c. 10.
lib. 2. Celsi.

LXXXII. We must take some Broth half an hour before Venesection according to Hippocrates's advice; Lib. de Ulcer. A Vein is to be opened when a man has dined, and drunk more liberally or more sparingly, and is a little warmed. Some Arabians will have the mouth of the Stomach to be fenced and strengthened with a little Meat, especially in those who have a weak Stomach, or its orifice of a more acute sense, and are otherwise weak: the innate heat is dissolved by the letting out of the Blood, and the choleric Humours rage more when their bridle is taken off, whence there is danger of Swoonings. There is given either Bread dipt in the juice of Pomegranats, or simple water with Sugar and the juice of Lemons for a Stomach that is weak from an hot intemperature, or has bitter Choler floating upon it: Some give a cup of cold water to drink, and so prevent fainting away in such as are subject to it through swift motions of the mind. Galen Comment. in lib. de Ulcer. seems to dissent, advising to defer Venesection so long as may seem sufficient for the Concoction of the Viſuals, and that the Excrements of the Belly may have while to descend. Rhazes (l. de v. f. cucurb. &c.) says, whilst the Viſuals are not digested in the Stomach, or expelled by the Guts, either spontaneously or by a Clyster, let there be no letting of Blood, lest something be attracted of that which is in the Stomach and Guts, to the Liver and its passages, and is as yet crude. Others alledge that the use of Meat before is inconvenient, denying the validity of that Argument that is taken from the impairing of the Faculties. The Bodies of all Sick Persons are not weakened, or resolved by bleeding: such as are oppressed with a burthen of Plenitude or Cacoehymie are rendered more lightſom. They also reject drinking of water before Venesection, seeing Avicenna teacheth, that he that drinks cold water before or after bleeding may fear a Dropſie because of the water's being inatched into the Veins. The truth seems to persuade one to approve of the use of Broths: these may refresh Nature both by way of prevention and cure: Julaps, &c. may be used also as well as these. A draught only of Water or Beer, or a potech Egg, can produce no harm. To the Reasons I answer, 1. The impairing of the Faculties is not so slight in those who are unaccustomed to bleeding, and in the infirm. 2. The more sparing use of Broths, Julaps, a mouthful of Bread dipt in Wine, &c. causes no danger of crudity. Avicenna speaks of an immoderate draught of water.

Rollins. libid.
c. 6.

LXXXIII. It is discussed by some later Physicians, how long we must abstain from Meat after bleeding? Galen after having bled a Young man sick of a Synochus without Putrefaction, gave him some food two hours after: Others have said that we may allow Viſuals one hour or two after bleeding, though not much. But this is a thing for the Physician to guess at, according to the quantity of the Blood that is let and the strength of the Patient's Faculties: For Galen said two hours, because he let Blood very plentifully, whereby his strength and spirits were weakened, so that he fainted away.

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away; wherefore the Stomach was not to be burthened with Meat at that time. But we that bleed far more sparingly, and do not so diminish the heat, spirits and strength, have no reason to tarry so long: wherefore one hour will be enough; when less than a pound of Blood has been taken; half an hour, when less than half a pound; for the Parts are but little drained, and but a few Spirits are exhausted, and there is made but a small agitation of the Humours. The habit of the Body ought also to come into consideration, as it more or less abounds with Blood, and is more or less dense.

Rubeus.

LXXXIV. Some avoid giving their Patient any thing to drink after bleeding; but *Amatus Lusitanus* proves that it is not hurtful, but wholsom, ordering him to drink presently some cold water: For by reason of the Veins being emptied it is presently distributed into the Body, and cools it more easily, quickly and safely.

LXXXV. Some Physicians forbid sleeping after Venesection, because they believe that the Blood retires to the Heart, which yet is not always true, unless perhaps the bleeding have been immoderate, or the Patient be in danger of swooning through fearfulness. Besides, no reason perswades that such retiring of the Blood is pernicious; for the Blood uses in sleep to retire to about the *Præcordia*, to the great recruiting of Nature: And how great benefit Sleep when it comes does to those Sick Persons that have had restless Nights, every one knows; for it recruits the faculties, and concocts the morbidick Humours; whence we are oft put upon using Remedies to procure it. If therefore it come a little after bleeding, it will be good, both as a *Sign*, because it shews that Nature which was oppressed is now relieved and performs the natural Functions; and as a *Cause*, because when Sleep succeeds, Nature concocts the remainder of the morbidick Humour. Indeed Sleep hurts in the Inflammations of the internal *viscera*, in the beginning of Ague-Fits, in Pestilential Diseases: but why we may not sleep in other Diseases, I see no reason. *Galen* writes that Sleep coming on does indicate the firmness of the Crisis; for it happens sometimes that the Patient sleeps a whole day after the Crisis, if he were long without Sleep before, to the great comfort of Nature: yea it happens that the Patient sleeps sometimes even in the very Crisis. If Sleep therefore help when it comes after other evacuations, why should it not do so also after bleeding? Yea if a man may safely be let Blood when he is actually asleep, what hurt can Sleep do presently after bleeding? *Galen* esteems it as a good sign when the Patient falls fast asleep after bleeding. If any say, that Sleep is therefore forbid lest the bandage should come loose; that is nothing, for by the diligent care of those who wait on the Patient, and right tying of the Fillet, that may be prevented.

Gal. Meth. 9.
c. 14.Primros. de
vulg. error.
l. 4. c. 26.S. Paul. Qua-
dr. Botan.
p. 396.

LXXXVI. I my self have seen a simple Decoction of crisped Mint stop the circular motion of the Blood so, that not a drop of it would issue out of the Foot, though the Surgeon thrust his Lancet deep enough three or four times into the most apparent branches of the *Saphena* in the Foot for bringing down the Terms in a certain Woman, for whom her Maid had prepared a Decoction of Mint instead of common water to hold her feet in. Whereupon she was bid to provide simple water, into which her Mistress put her feet to above the ankles, and then the Vein being cut again by the ankle, the blood issued forth.

LXXXVII. In the Diseases of Children and Women with Child the Physician consults well for himself and his Patients, if himself be present when they are to be bled: for those who are intrusted with that operation, being too bold do suffer the blood to issue out too largely:

and if any unfortunate thing happen, 'tis presently ascribed to the Physician, though it be very evident to sense that the Artist mistook.

LXXXVIII. When a Nerve or Tendon is pricked by the Unskilfulness of the Blood-letter, see the Cure thereof under the title of *Convulsion*, lib. 3.

LXXXIX. A Nobleman having a troublesome Tetter, and fixing Leeches in the Morning upon the Part affected, when the Blood bursting forth to almost three Pound could be stanch'd by nothing could be done, *Prevotius*, having washed the little holes the Leeches had made, with an astringent white Wine, caused to be laid upon them with good success *Galen's* restraining Ointment of bole Armene and Hares wool.

Rhodius
Cent. 3.
Obf. 71.

XC. Not only the simple opening of a Vein is profitable, but also the cutting of them quite asunder avails to intercept many kinds of Defluxions. The cutting asunder of the Vein of the Forehead is the only Remedy to take away malignant Defluxions upon the Nostrils, as some have experimented: So that I do not wonder that the ancient Physicians, in Inflammations of the Eyes, blearyedness, &c. ordered the cutting asunder of the Forehead and Temple-veins. *Aëtius* cut asunder the Forehead-veins for a continual watriness of the Eyes, and pains of the Megrim. *Haly Abbas* cuts those behind the Ears asunder for curing a *Vertigo*. Yea the Excisions of the Veins of other Parts also are profitable for curing at once old and difficult Ulcers of the Legs and Arms, &c. Now the administration is thus to be order'd; first the Vein must be made to appear as in ordinary Venesection; then a crooked Steel or Silver Needle being thrust under it, the Vein is raised up, and then cut in sunder by a Sickle-like or crooked Lancet thrust in as deep as the Needle, the Vein being suffer'd to bleed as in common Phlebotomy: but for the most part in a slender and thin Skin the Vessel stands so out, that it is not necessary to thrust a Needle in, but the Administration may be performed by a Lancet alone that is very crooked towards the point: I use daily to practise this Piece of Surgery both ways.

Sever. Med.
Eff. p. 67.

XCI. If the Orifice in Venesection be too strait, it must be widened; as in stoppage, or constipation, that must be removed which stops or dissipates. But to amend the straitness, there is greater skill and pains requisite than if the Vein had not at all been meddled with; because the Blood is presently diffused betwixt the Skin and the Vein, and driving the Skin higher separates it from the Vein. As soon therefore as the Skin about the Orifice rises into a Tumour, it must presently be gently pressed by your left Thumb, that the violence of the running Blood may be mitigated and the rising Tumour depressed: then draw off your Thumb gently so far as till the Orifice appear, and you have room enough for the Lancet and the hand you hold it in: then put the Lancet gently and warily into the first Orifice, which make as wide as it ought to be. But in this operation we must take heed that the Skin alone (which is usual) be not widened without the Vein, for then both the pains and pain would be to no purpose. Put the Lancet therefore moderately into the capacity of the Vessel it self, and enlarge the Wound as much as is sufficient. If the efflux of the Blood be hindered from the recourse of the Skin, it is gently to be drawn back to the same place in which it was when the Vein was cut, that the division of it and of the Vein may hit together, and it is to be held there till the Blood have issued out as you desire.

Leon. Botal.
de 9. 11.

¶ But it happens also that the Skin, or rather all that which lies above the Vein, sometimes covers the orifice in the Vein, when yet the same was

was

was not removed out of its place : and that happens when the Surgeon thrusts his Launcet over slopingly into a vein that lies deep, and lifts not up its point, but draws it out again the same way he thrust it in : In this case, to make the Blood flow (if the Vein be cut wide enough) the Skin is to be raised up by putting a slender probe or the head of a pin under it, or the Vein is to be lightly depressed with the same probe or pin, till the Blood shall have flowed out to your liking ; for by this means the vein being thrust from the Skin or the Skin raised from the Vein, the Blood gains a passage.

Idem §. 12.

XCII. When a fillet is tyed about any member, and the Vein that uses to be found in that part, does not appear, but something that is round is felt deep under the Skin, of which you doubt whether it be a vein or not, presently loosen the fillet ; and if it be a Vein, it also growing lax will fall down and be no longer perceived by your finger till you bind the member again : but if when the fillet is loosened, that which you touched feels as it did before when it was tyed, then use not your Launcet, for it is not a Vein but a tendon, or the Head of a muscle, or something beside a Vein : And the Arteries beat where they are ; whereby both their situation and depth become manifest to even a meanly experienc'd Artift.

Idem §. 19.

XCIII. Patients often ask what Vein of the Arm they should have opened, because they have heard something of the distribution of the Veins in the Arm, one of which they allot to the Head, another to the Liver, a third they make doubtful, profitable to both the cavities, Belly and Head. Physicians introduced this opinion before Anatomy was so well cultivated as now it is, and many adhere to it still : But it is certain, seeing all the Veins of the Arm spring forth of the same Branch, that they evacuate from the same parts ; And that which is allotted to the Head empties no less from the Liver than that which is called *Basilica* ; though the *Cephalica*, because sometimes it receives a little Branch from the Head, is believed to profit more in the Diseases thereof : yet both do equally help the Diseases of the internal viscera, and do equally withdraw Blood out of the *Vena cava* ; and 'tis to no purpose to pitch upon one more than another, for they all draw Blood from the same fountain. Of this opinion are *Vesalius Anatom. l. 3. c. 8. Baubin in Theatro, Fallopius, Bartholin, Horstius tract. de Scorbuto*, and others. ¶ If the rule of late dogmata be consulted, the circular motion of the Blood takes away the choice of Veins : there is no prerogative of order amongst them, all the Veins enjoy a common fate. The Blood always ascends by the trunk of the *Vena cava*, and changes not its course upon the opening of the Veins of Arm or Foot ; but that which flows out, issues from that part of the opened Vein that is below the orifice that is made in it, and that Veins's twigs in the extremities of the Hands and Foot do again receive the Arterial Blood. Therefore the parts affected are not emptied directly : No fruit can directly be expected from the opening of a Vein in the Arm or Foot, viz. of the *Cephalica* in Diseases of the Head, though it be joyned by a particular Branch with the external Jugular : or of the *Basilica* in Diseases of the Breast, as the Pleurisie, though the same be joyned to the *Thoracica* in the Arm-pits. ¶ 'Tis all one which Vein you open, so it be plain : yet this caution should be used, That if the lower parts be ill, a lower Vein be opened ; if the upper, an upper : The Kidneys they otherwise place for the center of the Body as to its longitude, but this is better referr'd to the Heart : Bleeding on the same side with the part affected is better than on the opposite ; the cause lies in the Arteries, not in the Veins.

Primus de vulg. err. l. 4. c. 26.

Rolsine. c. 15. & l. de febr.

Walens. m. m. p. 80.

XCIV. Hippocrates §. aph. 68. propounds the opening of the fore-head Vein, but the Body is to be

diligently purged first, otherwise it may become hurtful, seeing it is a local Remedy. A man of thirty years old being troubled with a long Head-ach and Epileptick fits, by the advice of a Barbar suffered himself to be let Blood in that Branch of the Vein of the fore-head which in some bends a little to the left side, without any preceding preparation of the Body : But what came of it ? His eye in that very moment lost its motion, and became fixt, unmoveable and shut, an Inflammation arose in it, the pain in his head increased, and at length losing his speech he was with great difficulty recovered by the Physicians of *Basil.*

Hild. Cent. 5. obs. 18.

XCv. The *Ipsiadic* Vein, which is found in the outer ankle, ought not to be cut but with the strictest and fullest knowledge of the place, because of the Artery, Nerve and Tendon that lye near it.

Riolan. Enc. chir. p. 3. c. 3.

XCvi. The Jugular Vein is almost always opened in Cattel, as often as there is occasion for letting them Blood : 'tis strange that the same custom has not obtained in man, seeing this Vein is large and eminent, and may be cut the most easily and safely of all the Veins, because it has neither an Artery for its companion, nor any Nerve near it. Moreover by opening this Vein there is made an universal evacuation of the Blood out of all the Body, as well as by opening any other, and withal an excellent derivation of it from the Head, so that by it all stagnations or collections of the Blood and Serum in the Brain are remedied.

Willis.

XCvii. The Ancients opened the Jugular Veins in a desperate Quinsie which Remedy, though approved of many Moderns also is almost grown out of use in our times in that it is though dangerous because of the flux of Blood that can hardly be stanch'd because of the largeness of the Vessels. But experience has taught that this operation is not so dangerous if it be duly administred ; For first the Head of the Patient ought to lean on one side as much as may be, so that his chin may almost touch his shoulder ; then the Vein is to be opened without ligature with a small orifice lengthways of the Vessel (for so it closes more readily) and when you have taken as much Blood as you desire, by reducing the Head to its natural posture the Blood commonly stanches of its own accord : But to make the matter sure, *Galen's* plaster, made of Hare's wool, Aloes, Frankincense and the white of an Egg, is to be applied, and thereby the flux is certainly stoppt. Of its efficacy, See *Trallian. lib. 1. cap. 1. Zacut. prax. adm. l. 1. obs. 89.* and others.

Lazar. River. l. 6. c. 7. & l. 1. c. 2.

XCviii. Hippocrates opened the external Mammaries in inflammations and pains of the parts in the Breast : But seeing they are obscure, this operation is now grown out of use ; and instead thereof Leeches, or Cupping-glasses with Scarification may be applied.

Riolan. Enc. chir. p. 237.

XCix. Many Physicians advise to open the Veins of the Nose with a Launcet, and Leeches, but neither way is safe : for seeing they are not open to the sight, the Surgeon may easily mistake ; nor can the wound be so bound up as in the subcutaneous Veins : Nor is it safe to put Leeches into the Nostrils, seeing they may easily creep too far in and stick so obstinately, that they cannot be easily drawn out, and they may cause a great Hemorrhage. Instances are given by *H. Saxon. l. 1. Pract. c. 2. Sennert. Pract. l. 1. p. 1. c. 8.* See *Zacut. l. 1. hist. med. princ. 4.* where you have a story of a Leeches creeping up the Nostrils into the Brain, Yet in the year 1666. I saw Leeches applied to the Veins of the Nose with good success, in a young man ill of a phrensie. Let the Surgeon hold the tail by a course Linnen rag, and not let it go till the Leech be fasten'd, and so they may be used without danger : If there follow too great an Hemorrhage,

if

it is easily stanch'd by sprinkling astringent Powders upon it, &c. which apply to the extremities of the Noftrils, and not to the more inward parts.

¶ In the year 1674. the Jaundise was frequent amongst us: Some got themselves to be let Blood in the apex or tip of the Nose, the sooner to free their face from its full colour, which indeed I could not but laugh at at first sight, seeing it is unusual with us: Yet I found that *Galen* commends the opening of this Vein in a continual pain of the Head; and *Botallus* l. Cur. rat. per sang. miss. affirms, that he has often at the persuasion and instance of an Empirical Physician, made use of it in old Diseases of the Eyes, as also in long continuing pains of the Head; but that he has observ'd it more profitable in redness of the Nose than in the above said distempers. I have sometimes order'd it to be opened in the Jaundise, but with doubtful success; for those were as soon cured, and recovered their former colour that had it not open'd, as those that had.

C. Sometimes the Veins of the Nose are opened by a Lancet, and sometimes by Leeches, but I do not at all approve of this way. A Senator here at Padua once being ill of a burning Fever, had one Leech applied to his Noftrils, which crept up into his Head, and the miserable Patient died of a too great Bleeding which the Leech caus'd; for she could by no means be either killed or drawn out again: And I was very much troubled at it, having seen the same thing happen at Venice formerly. ¶ Great caution is to be used in applying of Leeches to the Noftrils, lest they taken upon some part that they should not. It happened at Rome in the year 1572. that a certain Surgeon would needs apply a Leech to one, which being supposed to have fasten'd on the inside of the Noftril penetrated a while after to the very coats of the Brain and staid there a long time, even till she had killed the man, those means that were made use of for drawing her forth doing no good.

¶ Yet by the help of this Remedy I saw a phrensie cured in the year 1666. in a Switzerland youth of about 14 years old. But in the application let these cautions be observ'd; first that the Leech being held in a course rag be not let go, till it appear that she has fasten'd firmly to the extremity of the Noftril; secondly, that the Noftril to which she is applied be squeezed together with our fingers, that she may be hindered from ascending or penetrating further.

CI. The opening of the *Vena poplitea*, usual heretofore, is now out of use, yet it might be conveniently opened if the Leg were plunged to above the Knee in a tub of hot water, and chafed, as is usual in opening of the Veins of the foot. 'Tis easie to find and safe to cut below the hollow of the ham, at the beginning of the *musculi Gemelli*.

CH. The Veins under the tongue, or *Raninae* are often opened with good success in Diseases of the fauces and Head. *Aurelianus* alone (l. i. acut. c. 12.) hath disapproved hereof, because the Head is filled hereby and the flux of Blood cannot be stoppt. 'Tis true that the Blood hath flow'd so plentifully in some, that it has been very difficult to stop it, as was observ'd in *P. Capucinus*. ¶ If Preachers be troubled with an Inflammation of the Tonsils, we ought not to open the *Raninae*, for stammering often follows upon it. ¶ A young man ill of a Quinsie died by opening the *Raninae*, because while the Blood flow'd largely and through carelessness he spit none out, he was choaked by it. We must therefore take heed that in such Venesection the Patient lye not straight along, but bend a little forwards; for now that the expulsive faculty is weak, even a little Blood falling upon the weazand may choak. ¶ The Veins under the tongue are to be opened lengthways, otherwise 'tis difficult to stanch the Blood.

¶ The Egyptians do so much confide in this phlebotomy, that they use it as a secret for any Inflammations of the Head, and distempers of the Eyes, for redness of the face, a phrensie with a Fever, want of sleep, acute Fevers, when on a Critical day Nature delayeth a Crisis by an Hemorrhage. *J. de Partibus* says that it is profitable also for Tertian Agues.

CIII. Many believe the opening of the *Salvatella* to be superstitious. Nevertheless *Hippocrates* opened the Veins of the Hand; and that Remedy has not been disapproved by learned men, especially in Chronical Diseases and the Quartan Ague, in the conjunction of the Sun and Moon: This I have seen to succeed happily, both to my self and others, in Chronical Quartans, after divers Remedies had been used in vain.

CIV. They commend the opening of the *Salvatella* in Diseases of the Spleen, of which *Adrian Spigelius* 5. Anat. cap. 7. gives this reason, because the fervor of the Spleen may thus be ventilated, and by the succession of Arteries the effervescent Blood may be somewhat securely evacuated: and so it is done by consent through the communication of the Arterial Blood, which poured forth together with the Venal because of the anastomoses of the Arteries that are near to the Vein that is opened: And seeing there are six times more Arteries in the Spleen than Veins, 'tis indeed very necessary that much benefit should accrue to the Diseases thereof, because the Blood is evacuated out of those Vessels in which it offended. But if the circulation of the Blood had been known to *Spigelius* (which he seems to have come near the knowledge of) it had been easie for him to have given a more certain reason; namely because in the extreme parts there is a greater number of Anastomoses of the Veins with the Arteries: Therefore the reason of the profitableness of such Blood-letting is to be drawn from the drawing out of the Arterial Blood, or of that which flows very near out of the Arteries.

CV. *Spigelius* did in himself and others open the Vein that runs betwixt the fore-finger and thumb for a stubborn Head-ach, and it proved a present Remedy, as is related by *Job. Rhodius* cent. 1. obs. 56.

CVI. And *Zacutus* (in prax. admir.) relates, that a woman who had been long troubled with an Head-ach had that Vein opened which runs by the corners of the eyes. This Vein becomes apparent by tying the Neck moderately, and under the Arm holes strongly. *Avicen* 4. in cap. 10. proposes the opening of it.

CVII. *Zacutus* (prax. admir. lib. 1.) applied ten or twelve Leeches round about the temples in a stubborn Head-ach, which proved a present Remedy. *Riverius* bids us note that he applied ten or twelve, that all the matter might be drawn forth, and not two or three.

Scarification.

Scarification.

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I. **T**HE Ancients practis'd Scarification far more confidently and frequently than we now adays, who use it in no other cases but in a certain private application of Cupping-glasses, and in the cure of Gangrenes: namely because we are unskilful and slothful, and afraid of safe Remedies, and contract an Art that is rich and very full of help and Remedies, into a few and rare things; which nevertheless are slight and ineffectual: being always ready to alledge, that men in old Time were of a firm and strong Nature and able to bear great Remedies, but those of our time are all of them feeble and weak: So that most are afraid of making incision in the part affected, for fear of Attraction as they call it: but *Prosper Alpinus* (*lib. 2. de Med. Egypt.*) does readily refute these by the event which uses to be successful and void of any new defluxion upon the Part. *Seb. Travius* declares *Oribasius's* opinion of Scarification to be safe, if the fluxion be arrived at its state; though a fierce Fit should follow the said vigour of the Disease: And I can of my own knowledge testify, that having practis'd it in the publick Hospitals of the Incurables, I never knew any man that found it unprofitable or cryed out upon its unsuccesfulness.

II. I can upon mine own Experience testify, that Scarification is of wonderful efficacy to ease all Pains that have invaded the outer part of the Body: To relate a few of many, let that be the first, which I experienc'd in N. who being afflicted night and day for many Months together with Venereal Pains in his Leg, and could have ease by no Medicines, but was almost kill'd by them, had them wholly removed by the help of Scarification. 2. Let the second instance be N. who was trepann'd, and having a cruel Pain arising many days before about the *bre-gma*, was relieved by this Remedy. 3. By it I cured a great Pain in the *Perineum* in a Shoe-maker. 4. I cured also a Porter that was grievously pained hard by the soal of his Foot. 5. By the same Remedy I gave such Ease to a Jesuite that had had a continual pain in a Toe for many Months, and could be helped by no other Remedy, that the pain never returned again. 6. By this means I disscuss'd a pain in the *Perineum* in *Joseph N.* that was in very great danger of Apostemating. 7. One that was much pained in his Loins and made pitiful moan, received seasonable relief from this very thing.

Severin. med. eff. p. 78.

3. The Ancients make no mention of Scarifications in the Ears: *Is. Theod. Minadeus disput. 4. de Curabit. &c.* approves of them, and adds, that such

Scarifications are delectable to those who are mad-drunk with Wine, or who have their head loaded from any cause, first chafing the Ears with warm water, and then Scarifying their extremities outwardly, not very deeply or largely but slightly; yet so as may draw Blood from thence to an Ounce or a greater quantity; by which Remedy the pain in the Head remits, not so much through the evacuation that it makes, as through the consent of the pained part with the Head, seeing the pain either is the offspring of a too thin Blood; or has its rise from an hot exhalation. This benefit of this Remedy, is confirmed, says he, by all *Arabians*, *Cretians*, *Grecians*, who use to heat themselves with Wine even at this day. The Scarification of the Ears helps much in the acutest pains of the Teeth: yea if it be repeated, it may supply the place of venesection. Maids in some parts of Germany let their Ears be Scarified to make them more Beautiful, namely that their Face may look whiter through the evacuation of the Blood.

IV. Let not the Scarification in the hinder part of the Head be too deep. *Avicen* tells of one that fell into a Palsie of his Tongue upon applying a Cupping-glass with Scarification: namely the Scarification being too deep, pricked the branch of a Nerve that goes from the beginning of the spinal Marrow to the Tongue.

V. Many dare affirm that Cupping-glasses with Scarification supply the place of Venesection; whose opinion is erroneous and estranged from truth. For *Galen* speaks not a word of Cupping-glasses for taking away the plenitude of Bodies, as many of our Physicians think; but he mentions only Venesection and Scarification of the Legs: which is gathered from 2. *Aphor. Comment. 17.* The evacuation of all the Humours equally, which indeed is the most equisite, is made by Venesection: and the next to this is that which is made by Scarification of the Ankles. And in his Book of *Leeches*, Cupping-glasses and Scarification he has said, That in *Plethorick Bodies* Cupping-glasses are not only unprofitable, but hurtful. And in his Book of *Curing by Bleeding* he has taught, That before the application of Cupping-glasses the whole Body ought to be evacuated, and that those are to be applied either with Scarification, or without it. The same Person has said also *Lib. 2. Aph. & Lib. 4. de Sanit. tuend.* and in many other places very plainly, that Scarification of the Legs obtains the second place after Bleeding. And 13. *Method.* he has writ, If the Body be *Plethorick*, Blood is to be let either by opening a Vein, or Scarifying the Legs.

VI. 'Tis controverted concerning the place in which this Scarification is to be made: *Amatus* uses it in the Arms and Legs: The *Egyptians*, as *Alpinus* relates, make incision in the calf of the Leg with long and deep Scarifications, and draw Blood from thence very quickly and largely, first bruising and beating the Part, that it may lose all sense. *Galen* almost always mentions the Ankles, that is, the Parts nearest the Ankles: but how there can be an incision made in them with profit and safety, is hard to understand, because of the many and notable Nerves that are seated there: besides that they are dry and without Blood. I am of opinion that no certainty can be had of that matter, especially from *Galen*, who though he often make mention of the Ankles, yet he also propounds a Scarification of the Legs and Arms. But I thus conclude, both from the authority of *Galen* and of the foresaid Physicians, that this Scarification may be performed; as necessity requires, both in the Legs and Arms, and that both indeed contribute to the evacuation of the whole: but that by that in the Legs, the plenitude that arises from the suppression of the Terms and Hemorrhoids is evacuated; and by that in the Arms, the plenitude that arises without these causes.

Gn. Rolsine m. gener. p. 400. See 2. Pros. Alpid. de Med. Egyptior. l. 3. c. 2. Valer. lib. 6. Epidem. p. m. 761.

Remed. O. Lib. 1. c. 1. 2. c. 3.

Pr. Alpid. Met. Egypt. l. 3. c. 3.

Remed. O. Lib. 1. c. 1. 2. c. 3.

Remed. O. Lib. 1. c. 1. 2. c. 3.

Claudini de Ingr. l. 2. c. 6.

VII. At Padua in my time there was so violent a flux of water from only two incisions of the Ankle, that a Woman died outright of it. Also when the Blood in which the heat is lodged, is evacuated, there sometimes succeeds a Gangrene.

Johan. Rhod.
Centur. 3.
Obf. 17.

VIII. The Egyptians use to Scarifie the Skin in very many Diseases: For in the most violent Pains, especially such as proceed from a plenitude, or a poisonous quality hurting the sensible Parts; in a fluxion that is somewhat fixt, after an universal both purging and evacuation, they use to Scarifie the pained Parts, or those next them, deeply, and to let a great deal of Blood run out: For in all Inflammations that continue long, they use deeply to Scarifie the inflamed Part, as the pained side in a Pleurisie, and the Breast in a Peripneumony, and the right Hypochondre when the Liver is inflamed, and the left, when the Spleen: and thus they are wont to do with other inflamed Parts, especially in great Erysipelas's, or any other inflamed Part, where there is fear it should degenerate, into a Gangrene or turn to a Scirrhus. They are wont most frequently in pains of the Gout, that arise from a defluxion of the Blood after universal evacuation, to Scarifie the swelled aking Toes; for part of the defluxed Blood being evacuated by that Scarification, it profits wonderfully. In like manner they use Scarification both in Tumours, and Ulcers that will not heal up: as also for all defedations of the Skin, spots and pustules: And no less do they deeply scarifie a Part wounded by a Scorpion, or bit by some wild Beast, and by that means they draw a great deal of Blood from the Part.

P. Alpinus
Med. Egypt.
c. 11. l. 3.

IX. A lusty man, of a good habit, having never had any Distemper of Body for Fifty years, used Scarification on his Back every Month, and let the Blood flow out even till he fainted: hereupon at length he fell into Catarhs, which possessing the Neck without any apparent Tumour brought a difficulty of swallowing both Meat and Drink, which Disease continued for a Month, and after a year returned again and choaked the Patient. Whence it appears that the importune use of Scarifications does great harm and causes cold Diseases.

O. Grembs
Arb. ru. &
int. p. 169.

X. Galen (1. ad Glaucen. c. 7.) makes a threefold manner of Scarification, a slight, deep and mean. When the Humours are thick, tough, compact, either in part, or in whole, the deep is necessary. An unwary Surgeon curing an abscess arisen from a thin Humour upon the spine of the Back, made so deep a Scarification, that cutting the Nerves he cured the man indeed of the Tumour, but made him Paralytick. Another made so deep an Incision with a sharp Razor, having no Launcet in readiness, that there follow'd an Hemorrhage which could never be stanch'd by any Remedies, no not by a Caustery it self, but the Patient died of it.

Zacut. prax.
admir. lib. 3.
Obf. 65.

idem Obf. 66.

XI. Scarification in general is very much suspected by some; whence also Grembs (in Arb. ru. & int. l. 3. c. 1. § 48) disallows of Scarification, pretending that a no small hindrance of long life is the bad custom of Venesection and Scarification, which hath so prevailed, that in some Families they use Scarifications once a Month, and Venesection twice a year, whereby they lavishly spend the treasure of life. But experience says the contrary, for some may be found of Sixty, yea, I have known some of Seventy, that even from their Childhood have used this Remedy without hurt. Nor is that true, That he who has once scarified, must necessarily continue it all his life long, unless he will precipitate himself into danger of his life: I knew one, says D. Mabius, that when he was a Boy of about Eight years old, being subject to frequent Ophthalmies and Fluxions upon his Eyes, by the advice of a

skillful Physician used Scarifications twice a Month till he was Ten years old with good Success: And when these Diseases ceased, he left off the Scarifications also without falling into any Disease, and is still alive, and healthful and sprightly.

Fr. Hofman.
m.m.l. c. 18.

XII. There arise a great many Veins from the Loins, which you cannot plainly see unless you cut the Skin from that Part: wherefore Scarifications of the Loins are very good to revell from the upper Parts; and in some Countreys those Veins are opened, if they appear to the Phlebotomist, if we will believe Platenus in his Anatomy.

Riolan. An-
thropogr. l. 2.
c. 6.

XIII. We must not make incision with too sharp a Launcet, which a Surgeon once doing in a Boy, thinking that by that means he should do it with the less Pain, caused a great Convulsion: for often either the Membranes under the Skin, or the Nerves are hurt: besides that the thick Blood is not evacuated thereby, but only the thin, as Hippocrates (lib. de Medico) teacheth, who for that reason bids us use Launcets that are crooked at the end, and not very narrow; yea sometimes serous and sanious Humours become viscid and thick, whence there is danger they should stay in the too narrow gashes. That the Scarification should be made by drawing the Knife along, and not by stabbing it in, Experience shews and Reason perswades.

Rubeus in
Celsum lib. 3.
c. 11.

XIV. 'Tis certain that in foul and Cacochemical Bodies there are often raised malignant Defluxions upon several Parts. I order'd dry Cupping-glasses to be applied to the Buttocks and Back of one infected with the Pox, for a cruel pain in his Head; which having done, one by the Loins grew into so great a bulk, that for the Tumour and great redness, he that made the Application was forced without my advice to Scarifie it: But he could never heal up the Ulcer, yea a virulent Humour flowing out by it, and Blisters full of black Blood being raised, there arose a Gangrene spreading deep upon the Spine, and thereupon Convulsions, all which brought the man to his end.

Zacut. Prax.
admir. l. 3.
Obf. 67.

Spleneticks.

The Contents.

- They respect either acid, serous Humours; I.
Or the acrimonious, saline lixivial; II.
Or the tartareous and viscid Phlegmatick sliminess of the Blood. III.
How Steel remedies profit the Hypochondriacal. IV.
They profit not all alike. I.
Volatils often hurt. V.
Acids are often beneficial. VI.
The Spleen requires strong Aperitives. VII.
How Steel remedies are to be used. VIII.

I. AS the Liver does more dispense the Sulphur of the Blood, so does the Spleen its salt and serum. Now Spleneticks and Hepaticks are good together, and they are commonly one and the same; hence likewise Aperitives chiefly belong hither. Spleneticks respect either I. acid, austere humours that fix the Blood, and induce Melancholy, Dullness, &c. such as are (1.) all aqueous diluting and mitigating Remedies, chiefly Nitrous, Medicinal Waters, Whey, which, besides their Salts, borrow the greatest part of their virtues from their watry Particles. (2.) Gentle aromatick and bitter things, ranked under Hepaticks. (3.) Fixt Lixivials, and volatil Alkali's: thus the Salt of Wormwood, of Centaury, the tincture of Tartar, Spirit of Sal Armoniack, Antiscorbutick Plants, &c. belong hither. For as those

those acid Humours concentrate and fix the Blood; so these very volatil, Saline and Sulphureous do set at liberty, subtilize, and volatilize it, so that from that Lye that it was reduc'd unto, it is again invigorated. (4.) *Earthy* Medicines, coming towards the nature of Alkali's, and Resolvents: Thus *Helmont* extols Crabs Eyes boiled in Wine and that have acquired a lixivial taste: Thus also *Glauber* affirms that the Powder of Corals does profit the Hypochondriacal only, because they absorb an acid: thus the filings of Steel, even taken in substance, profit. And hence also as good as all, and a *Panacea* of the Hypochondriacal are (5.) *Steel-remedies*, the reason of whose action is no other than that by absorbing they invert, saturate, sweeten and render profitable those acid Humours; No other wise than as *agua fortis*, and acid Spirits being poured on Steel grow sweet, their Particles being blunted and turning to Vitriol: These very Remedies are profitable on this account in Hypochondriack Melancholy, in Pains of the Hypochondres, Cachexie, the beginning of a Dropic, Scurvy, palpitation of the Heart, Swooning, &c. *Vitriolate* Remedies themselves belong hither also, both those which are originally such, and chiefly those which are regenerated of Steel, as *Vitriolum Martis*, &c. which after their manner do also absorb, strengthen and saturate also acid, pontick Humours.

II. Or 2. *Acrimonious*, saline lixivial humours, whether they be more eminent apart, or concur in Predominancy with acids. And such Remedies indeed, besides watry diluents (which are common as it were) consist of (1.) *Acids*, in regard they fix as it were the volatility of the serum, and are profitable in the too great Hemorrhagies of the Cachectick and Scorbutick, as by these means I have cured some that have been so affected. (2.) *Austere* Remedies, which do concentrate the same as it were and hinder a too great rarefaction, as the anti-phthical tincture of *Grammanus*, styptick Powders, &c. and they are good when the Serum is too fluxile, in colliquative Fluxes, immoderate Sweats, in which case there is sometimes place also for *Opiats*. (3.) *Earthy* things, inasmuch as these also absorb and precipitate, as has been explained elsewhere. Among Spleneticks *Ceterach*, or Spleenwort, &c. are good as in other cases, so in inflammations, anxieties and pains at the Stomach, &c. of the Hypochondriacal.

III. Or 3. the tartareous and viscid Phlegmatick sliminess of the Blood, immersed in a greater or lesser quantity of serum, such as are chiefly (1.) *Acids*: Whence it is not unreasonable to think that even mineral acid Spirits do sometimes much, if not all, in curing the Hypochondriacal affection; for they incide and attenuate mucilaginousness, especially the Spirit of Salt, &c. these also free the first ways from that notable mucilage, that lines the Stomach, which they carry either to the passages of Urine, or dispose to go out by stool. (2.) *Alkalines* and *Eniza*, which on this account are called Saponaries; these do notably carry away and absterge the Lees of the Blood, as *Helmont* speaks; the tincture of Tartar, the arcanum of the same, Tartar vitriolate, &c. (3.) *Aromaticks*, as others so especially carminative which use to profit both inwardly and outwardly in those cases; yea both the now mentioned things do so conspire as it were in this third vertue, that they procure a free course to the Blood, and that the Serum be not hindered in its office, whence also bitter things, and other belong hither: these also correct that dullness, and deficient spirituaence and aerecence of the Stomach, or rather of the chyle, and do especially avert *Scirrhus*'s of the Spleen, and are of principal efficacy in Quartan Agues and its Symptoms that arise from hence. For it cannot be, but when either the Blood is too much fixed by acids, or the oily, Balsamick particles of the Chyle are not separated, slimy, thick, tartareous

excrements must be bred, and be fasten'd here and there, but especially in the Spleen. (4.) Hither belong also *Abstergers*, *Diaretics*, and *Nephreticks* likewise; for it is certain, both that in the Hypochondriacal a gravelly sandy matter, that proceeds from the tartareous muddiness of the Blood, is separated with the Urine; and also that most who are troubled with the stone are Hypochondriacal withal, and that antihypochondriacks are proper for these also.

IV. From these things it is clear, both that any specifics in general, and in particular spleneticks and Antihypochondriacks, are not all of them proper for all Persons: for like as either austere and acid Humours, or Lixivial, Volatil, and middle (such as chiefly cause colliquative sweats) or the muddiness of the Blood offend more, so likewise doth the application of these vary; so as that if a man proceed in order, and apply them promiscuously, he shall rather load the Patient with Symptoms than relieve him.

V. Volatils, as well others, as Antiscorbutick, do often hurt the Splenetick, and even the Scorbutick themselves. This is clear from what has been just now alledged; for if the Hypochondriack person have a Blood that is full of Saline, Lixivious and Alkaline atoms; if he be troubled or abound with an over fluxil and volatil Serum; those thing indeed are not good: whence 'tis an error to administer Antiscorbuticks indifferently. Hence I have often seen all the Symptoms that were hardly allayed, as preternatural heat, watchings, &c. raised anew by the Spirit of Scurvigrafs, which had also been used hand over head for the extracting of other Aperitives, for instance of Steel.

VI. *Acids* are often good, and so it cannot be said simply, He is hypochondriacal, therefore no acids are to be given him. Hither belongs *Lippus*'s Encomium of the Spirit of Vitriol (*Cent. 1. Epist. 81.*) for when through a sedentary life he had contracted a great sliminess of Blood; whence also he voided by Stool glassie Phlegm, he used the Vinegar of Vitriol with no bad success. Likewise temperate, and absorbing, and diluting Remedies are profitably administered to these: Hence *Servius* (*Inst. Med. 6. 3.*) I have sometimes benefited the Hypochondriacal rather by cooling than healing Medicines, by Whey, Mineral Waters, and other things whereby the heat of the Hypochondres might be temper'd: and so neither are these things to be administered without the active, nor those without these temperate Remedies. The Serum is to be attended to in all cases, that it be neither defective nor abound too much with saline Particles.

VII. But the Spleen requires stronger Aperitives than the Liver: This is the affirmation of *Galen*, which though *Mercatus* oppugn, and grant it only of the external use; yet it is true where either the Spirits and Blood are fixed; or sliminess is Predominant in the Blood: hence for instance the Spirit of Sal Armoniack is very profitably given to the melancholick even in drink.

VIII. Those must use motion that take Steel Remedies, and the Excrements of the Belly are to be considered: Motion I say must be used, that the sluggish Humours may be excited, and the Medicine may be better actuated and descend; but this is principally to be meant when they are taken in a dry or solid form, for then, unless motion be used, they do not work well: And the Excrements must be consider'd, because they are tinged by Steel-Medicines, so that they are voided black, because of the Vitriol that is drawn out of the Medecins, which is a manifest token that there has been a resolution thereof made. And it is to be noted, that they are not to be given (in substance and a dry

G. W. We- dry form) except the Stomach be strong, so that, if I may so say, it can bear and concoct them.
del. de f. m.
Ac. p. 107.

Stillicidium, or Pumping.

The Contents.

- It is a very effectual Topick. I.
We must have regard to such Indications as forbid it. II.
To whom hot Baths are hurtful. III.
How cold Stillicidia are to be used. IV.
To what Parts they are chiefly beneficial. V.
What Part of the Head is to be exposed to them. VI.
The manner of administering them. VII.
The Patient must not sleep the whilst. VIII.
What things are to be applied afterwards. IX.

I. **Stillicidium**, or Pumping, commonly called *Daccia* and *Gutta* (and improperly by some *Embroche*, which signifies Perfusion, from *ἐμβρῆχω*, to wet) is that form of Medicine, whereby there is made a distillation of a liquid Humour from on high like a shower upon some part. It is agreed by all that this *Stillicidium* excels any other form of external Medicine, as to its activity, and that indeed justly, because through the motion of the matter falling from on high, the Skin waxes hot and the Pores are opened, whereby is made the greater impression. The occasion of inventing this Remedy was twofold; the one the resistance of the Distemper as to other forms and manners of acting, through the stubbornness of the matter, or its too deep situation; the other, the disposition of the Part it self to which the Remedy was to be applied, when through the obstacle of the Bones it suffers not the virtue of a Medicine to reach to the part affected, unless it be administered with motion; on which account *Galen* (13. *Meth. c. 22.*) commends this manner of administration chiefly in the Head.

II. The Prohibents are many, and 1. a *Plethora* and *Cacochymie*. 2. An Ulcer and all solution of unity, yea and sometimes an evil composition of the Parts: But it is particularly forbid for the Head by a vertiginous Distemper, by a suffocating Catarrh, or an hot Catarrh; because seeing upon the account of this it ought to be cooling, it might do a great deal of harm to the Brain that is naturally cold: To which may be added that an agitation being made by such Remedy in the Head, an hot Catarrh, that is fluxile of its own nature, will fall more precipitantly upon the subjacent Parts, and thereby will cause great mischief.

III. Concerning waters that spring of their own accord it is to be noted, that the sulphureous, bituminous and aluminous (as *Galen* says 1. 6. *de tu. Valer. c. 9.*) are very bad for hot Heads, whether the heat be joined with driness, or with moisture; I say the sulphureous and bituminous, because they incend and melt the Humours; and the aluminous, because they conflate the narrow Pores.

IV. This also is to be noted, that such things are very seldom used in the way of *Stillicidium*, which by moistening may cool; yea this is to be understood of cold things in general, though they do not moisten but dry, as cold *thermæ* (or Baths) that they are never to be used alone, lest the innate heat be extinguished, but hot are always to be mixed with them at least in a threefold proportion.

V. *Stillicidia* are used to all places that are fit to have liquor fall upon them, but they are chiefly convenient for the Head, and for the Nervous Parts and Joints: The Liver, Spleen, Stomach, &c. see-

ing they are soft Parts, and therefore other forms of Remedies may easily work upon them, are not to be troubled with *Stillicidia*, save in a stubborn and inveterate Distemper.

VI. As to the Head, some distinguish certain Parts in it; for in a cold and moist Catarrh, Deafness, &c. they apply *Stillicidia* to the coronal suture; in a Palsie and Convulsion, to the hinder Part of the Head, where the beginning of the Nerves is, but whilst the Fluxion lasts, (for otherwise they use to water the resolved or contracted Parts themselves.) In other inveterate Diseases of the Head, such as the Head-ach or Megrim, they pour the liquor upon the affected or weak part it self. Indeed in my opinion these do not do amiss; but yet the virtue of the *Stillicidium* is always more easily and readily received by the coronal suture. In deafness the *Stillicidium* may be received very well in the region of the ears and temples: for if a mans skull be inspected, the Lambdoidal suture appears to reach even to the *Mastoides* process; and the sutures of the Temples appear to coincide therewith, so that the virtue of the *Stillicidia* may penetrate and enter into the inmost Parts of the Ears.

VII. It is administered two ways; the one without a Bath and separately from it; the other with a Bath, so as that the Patient ducking himself in a Bath, does withal receive the *Stillicidium*. The first way are almost all Artificial *Stillicidia* administered; and some of late think that Bath *Stillicidia* are best administered the same way: but besides that it seems too troublesome, Experience witnesseth that it is not so profitable.

VIII. Whilst the *Stillicidium* is administering the Patient must by no means Sleep, which he uses to be prone to when his Head waxes hot, and so a multitude of vapours is attracted to the Brain. But those do amiss who keep their Patients awake with loud singing, seeing the Head is filled therewith: Therefore we must endeavour to do it by talking to them, and by other ways.

IX. When the Embrochation is over, the part is to be dried and wiped with pretty warm Cloaths; and is either to be anointed with some oil of the same virtue with the *Stillicidium*, or to be fenced with something else that may preserve the quality imprinted by the *Stillicidium*. The vulgar apply a Linen cloth to the shaved part of the Head, and put a Night-cap over that: 'Twere better to apply a Cerecloth that is fitted to the Nature and Faculties of the *Stillicidium*: thus *Montagnana's* Capital Cerecloth, of Betony, &c. will be convenient for a cold Head.

Stomachicks.

(See Book 18. Of the Diseases of the Ventricle in general.)

The Contents.

- They respect either the heat; I.
Or the ferment of the Stomach. II.
Remedies strengthening the Ferment. III.
Correctors of it when it exceeds. IV.
What such Externals must be. V.
Such as respect the heat and ferment both, are very well joined together. VI.
What Stomachicks are bad for an hot and dry intemperature. VII.
In altering we must have a care we do not hurt the other viscera. VIII.
It is not to be overcharged with abundance of Medicines. IX.

I. Stomachicks

I. Stomachicks respect 1. the *heat* which is impaired and wants to be strengthened, of which sort are divers Restoratives indeed, yet they profit on this general account, that they are endued with an oily, volatil, aromack and sweet Sulphur which they contain, and are (1.) *Aromack* as *aromata* (or spices) the root of Burnet, Mint, &c. (2.) *Balsamick* oils, as Amber, Balsam of Peru, &c. for this very Medicine is indued with a Balsamick Acrimony, whence *Riverius* commends it in Vomiting, want of appetite, &c. (3.) Things indued with a *Volatil Salt*, especially such as is oily, as Pepper, Mustard, Ginger. (4.) *Spirituos* things, as wine, the Spirit of Wine, Mint, Juniper, Citron pill, &c. (5.) *Bitter* things, as Worm-wood, Aloes, *Elixir proprietatis*. (6.) *Carminatives*. (7.) *Mild Astringents*, as Cinnamon, Mastic, Peptick Powders, &c. (8.) *Nervine Cephalicks*, as Castor, Hore-hound, for there is a very great content of the Stomach with the Brain. All these things profit in an Anoréxie, injur'd chylication, belching, hiccough, pain at the Stomach, (in which case the oyl of Cloves and Carminatives are the most profitable) weak concoction, inflation, sympathy vertigo, and other Symptoms of the Stomach that arise from coldness: and generally the same things correct an *excessive heat* as correct a vitious ferment.

II. Or 2. they respect the *ferment*, which I call the *menstruum* of the Stomach. Now though those Remedies that contribute towards the restoring of this, do much agree and fall in with the aforesaid things, inasmuch as they also are indued with a saline Acrimony; yet this is to be noted by the way, That as those things which abound with a sulphureous Principle and are more Balsamick and oily, do more respect the weak heat of the Stomach and invigorate it; so saline Medicines do more invigorate the ferment: for there are some cases wherein the heat is strong enough, and yet the ferment hindered and fetter'd, so that concoction cannot be happily performed; though it be best that these fellow-causes, which stand for one, should be both attended together: and on this account we must also see that whilst we endeavour to strengthen the heat, we do not destroy the ferment, which is chiefly done by spirituuous things, as Brandy.

III. The sluggish and deficient ferment is whetted and recruited by all such things as are indued either with an acid Salt, or especially a volatil: 1. All *Acrimonious* things, as common Salt, which contributes indeed to the relish, but serves chiefly for a *stimulus* to the ferment, also pepper'd things, Antiscorbutick plants, the root of Aron, the Mustard of the Italians, &c. These things correct an acid crudity, and attenuate viscid phlegmatick Humours. 2. *Acids*, as Vinegar, which being used moderately profits both in drink and fomentation, Spirit of Vitriol, simple, and that of Copper, which Chymists call *sal esurinum*, the Spirit of Salt: some not unadvisedly reduce the ferment we make Bread withal into pills, and give it for helping the ferment of the Stomach: these things correct a nidorous and phlegmatick crudity. 3. Hither refer the coats of an Hens gizzard; but hardly any constant help is to be expected therefrom, unless perchance by accident, inasmuch as they withal absorb the bilious Humours that pervert the ferment.

IV. When the ferment exceeds in an Acrimony either saline, or bilious, (whither an hot intemperies also belongs) it is corrected 1. both by *blunting* of it, as *fat* things do, in the *boulimus*, or Dogs appetite; and also by *diluting* it, as watry things do; and likewise by *absorbing* it, as *Lixives* and earthy precipitants, which are called Alkali's, do, such as are Crabs-eyes and testaceous Medicines. Where note that these very things may also by accident, by restraining as it were and reducing into order chiefly an acid Humour, exceeding in the Stomach,

sometimes raise and reduce the appetite, whether alone, or mixt with acids, as for example the *tragea Stomachica* of *Quercetani* or *Birckman*. Thus I have very often observed that precipitating Powders, viz. such as have been prepared of shells only with native Cinnabar, have raised an appetite. For regard is to be had both to the proportion of the Acrimony that exerts it self in the Stomach preternaturally; (for the ferment of the Stomach is not as it should be, if it be excessively acid) and also to the continuation of the use, for all Lixives and Alkali's otherwise destroy the appetite and enervate the ferment, whence in the *boulimus* the oyl of Tartar per deliquium is a secret. Thus 2. the ferment is perverted (1.) by *sweet* things, because by their mucilage they obfuscate and blunt its saline Acrimony: (2.) *Acid Salts*, as for instance, it has been observed that *arcum Tartari*, that is otherwise a very famed Medicine, has by being too much used cast down the appetite: (3.) All *nitrous* things, inasmuch as they both dissolve the heat and the saline *menstruum*; whence in the continual use of Nitrous things we must see that they cause no disturbance in the Body: (4.) *Saturnine* or Lead-Medicines, especially the sweet and earthy; whence in the use of *saccharum Saturni* and the preparations thereof we must have a care we hurt not the Stomach: (5.) Strong *irritous Lixives*, as the Spirit of sal Armoniack. 3. and lastly, the ferment is fixed and obdured by Opiats, which are not good for the Stomach as such; and unless the ferment prevail, Vomiting is apt to follow the next morning, and by the use of Opiats the appetite is cast down: For as the Stomach rejoices in a Balsamick concocted and pure sulphur; so it is prejudic'd by such as is immature, impure and ungrateful. But these things that have been rehearsed, are good in all excessive Acrimony, whether it be with a *diarrhoea* or *cholera*, as also in a *Cardialgia* or pain at the Stomach, where besides Carminatives, oleous and the more temperate anodyne Medicines are required; they are good also in the hiccough, heat of the Stomach or *soda*, &c.

V. External Stomachicks ought to be 1. *Acid*, as fowr leven, vinegar; 2. *Aromatics* so called, with Wine, whether in the form of a Plaster or Cataplasm: and they are chiefly resolvents and revellents, as in an hiccough, Vomiting; likewise Carminatives: Earthy things are not so profitable.

VI. Note that it is very good so to joyn and dispose Stomachicks, that respect may be had both to the ferment and heat, which is done by mixing both sorts together: thus the sweet Spirit of Salt, and thus *Elixir proprietatis* macerated with the Spirit of Sulphur is good.

VII. In an hot and dry *intemperies* acids are to be avoided, and things void of acrimony are to be used; powders also are to be avoided, unless they be very much diluted, for otherwise they stick to the Stomach: but mucilaginous things are good: Hence the Spirits of Vitriol or Salt do cause a burning in the Stomach, by spoiling it of its native fermental viscosness, whence an erosion of it is apt to follow. This happens chiefly in the cholerick, and such as have first too much distended its Coats with drinking of Wine; whence the acrimony is more intimately insinuated into its unfolded plaits.

VIII. In altering the Stomach we must have a care we hurt not the other *viscera*, whether we use inward or outward Remedies; and especially that we hurt not the Liver which lies next to the Stomach; which we shall do, if we exceed the bounds of mediocrity.

IX. The Stomach is not to be overwhelmed with plenty of any sorts of Medicines, whether such as are design'd for it self, or with others; for as it receives the first benefit therefrom, so also does it the first prejudice. Thus in a certain Bi-

Gr. W. We-
del. de G. m.
t. c. p. 57.

shop was found the magisterie of Perles; in others, other things.

X. As in all Medicines, though destin'd for other Parts and Diseases, we must have respect to the Stomach how it bears them and is affected by them: so does that hold and is to be understood principally of Salts. Indeed amongst Stomachicks *Lixivial Salts* are also commended and prescribed, as for instance, the Salts of Wormwood and Juniper enter the Stomachick powder of *Birkman*, and sometimes the same have place in the weaknesse of the Stomach, but rather and almost only in case the ferment be tainted with a preternatural acrimony, and then they must be used with other Aromatics: For by the confession of all, this ferment is Saline; and if it be asked to what class of Salts it is to be referred, it is deservedly referred to that of acids, for it is somewhat acid in its farewel, as we say: yet it follows not from thence that every sort, be it never so fix'd and excessive, helps the action of the Stomach, but rather there arises from it a taint or crudity, and the chyme grows not Spirituous: And though sometimes when it exceeds with too great an acrimony, it encrease the appetite; yet it is vitious, and the particles are not rightly parted from one another thereby: whence in this very case, in the *appetentia canina* and *boulimus*, they profit more than any thing else: Thus I once cured an Hypochondriacal Person, that could not be satisfi'd with eating, with the Oyl of Tartar *per deliquium*. And the middle Salts do incide indeed and resolve, but injure the tone of the Stomach if used too long and too plentifully: whence Tartar Vitriolate, and *arcum tartari* being taken long and in a large quantity, hurt the same at length: By which experiment we plainly see 1. that neither lixivial nor middle Salts are to be used longer or in a larger quantity than is fitting; 2. We may gather from hence that the ferment of the Stomach is not acido saline in that sense, as if it were of the nature of acid Salts; but rather that it is Saline, and amongst Salts may be referred to the acid, though it be not so in its own Nature in the abstract. But acid Salts, though they come generally under another notion, are, as such, grateful to the Stomach: hence *acidum Tartari* comforts and strengthens the Stomach; and hence also acid Spirits serve the same end very well: But when acid Salts are modified by other accessories, they do not do so well; whence Alum and Vitriol rather hurt than help the Stomach, because of the Mineral metallick Parts that are joyned to them.

Idem phar-
mac. p. 184.

Sudorificks.

(See before, *Alexipharmacks*, *Diaphoreticks*.)

The Contents.

They agree in vertue with Cardiacs. I. Their difference as to their matter and faculties. II. The efficacy of a Sudorifick Diet, and where it has place. III. Sudorificks are not profitable for every Humour without distinction. IV. Lean Persons induce sweating well. V. What Humours may be expelled by sweating. VI. Wherein the vertue of some Sudorificks consists. VII. They are hurtful for some. VIII. Sweat is not to be provoked before the Humours are disposed. IX. We must but Sweat once a day, and that in the Mornings. X. We must Sweat several times, and not once for all. XI.

Sweat is not to be provoked in acute Diseases. XII. All are not to be compelled to Sweat. XIII. Sweating is not to be continued too long. XIV. Though Sweat burst not forth all of a sudden, yet it may come by degrees. XV. Absterion provokes it. XVI. Their efficacy to restore motion to the stagnating Blood. XVII. Hot drink taken whilst one is a Sweating promotes the Sweat. XVIII. Bezoardicum minerale is an effectual Hydrotick. XIX. Antimonium Diaphoreticum is but a weak Medicine. XX. It ought to be newly prepared when used. XXI. Those that are in the use of a Guaiacum Diet-drink, are to be purged every eighth day. XXII. How Sudorifick Decoctions make People fat. XXIII. 'Tis not good to give a bolus of Turpentine with them. XXIV. Salts are Hydroticks. XXV. The vertue of Decoctions depends on the Diet that is ordered in the use of them. XXVI. How the Decoction of Guaiacum is to be prepared. XXVII. The first Decoction draws not all its vertue forth. XXVIII. China and Guaiacum are not to be mixt together. XXIX. A strict Diet is not necessary in the use of a Decoction of China. XXX. Sassafras affects the Head too much. XXXI. Carduus bened. is to be given in substance. XXXII. The opening Roots are sparingly to be added to Hydroticks. XXXIII. When an Hydrotick Medicine being taken provokes not Sweat, it is not therefore hurtful. XXXIV.

I. *Hydrotick* Medicines, as to their ways of working, and Operations, have great affinity with most Cardiacs, commonly so called, inasmuch that many of both kinds are of a common or reciprocal use: and seeing they differ chiefly only as to their greater or lesser efficacy, when we are bound to pass from one *genus* to the other, generally we need only increase or lessen the dose, and chuse the fittest times for administering of them.

II. As to the various both kind and preparation of the matter, of which hydrotick Medicines are made; they are generally either the integral or elementary parts of some mixt Body: namely either natural Concretes are given in their whole substance, either simple or extracted, as when the Leaves, Roots or Seeds of *Carduus*, *Contrayerva*, *Angelica* or the like are taken in Powder, Decoction, Conserve or Magisterie: Or Diaphoreticks consist of the Particles of this or that element; namely spirituous, Sulphureous or Saline, either simple, or some prevailing over other; as if a Salt, Spirit, or oyl be extracted from *Carduus*, or other vegetable, mineral or animal Body, and be reduced into the form of a Medicine either by it self, or with other Preparations. We will briefly run over all, or at least the chief species of them. 1. Diaphoreticks, whose vertue consists in the integral Particles of the whole concrete, being unequally mixt, seem to be indued with some one element more eminent than the rest (*viz.* a Saline) and to owe their vertue chiefly to it. Now that Salt, upon which the hydrotick vertue depends, comes under a double state; for in some Concretes it is volatil and acrimonious or bitter, and in others Alkalizate and fixt in a fort. (1.) In the former rank are most Vegetables esteemed Antidotes by the Ancients, such as are the leaves of *Scordium*, *Carduus*, *Scabious*, *Perwinkle*, the flowers of *Marigold*, *Chamomel*, the roots of *Burdock*, *Zedoary*, *Galangal*, &c. Also the confecti- ons of *Mithridate*, *Treacle*, *Diascordium*, the decoctions of *Guaiacum*, *Box*, and the like, are reckoned among

Willis phar-
mac. rat. p.
m. 194.

among these: which kind of Medicines being taken into, and dissolved in the Stomach, make a tincture, whose particles, as being more hot and foreign, excite the animal Spirits, whence the *præcordia* being more briskly agitated do drive the Blood more rapidly about: yea they enter into & ferment the Blood that is in the Stomach-vessels, and so whilst they make it to be carried back more hastily by the Veins towards the Heart, they make it also to be driven more vehemently, even so as to cause sweat, by the Arteries into the habit of the Body. (2.) The other sort of Diaphoreticks, which whilst they consist of the Integral parts of the Mixt, have an Alkali Salt predominant, are Stones, and the Bony or Shelly parts of Animals and Vegetables, as Bezoar, Pearls, the Eyes and Claws of Crabs, and the like, whose Diaphoretick virtue proceeds chiefly from an Alkali Salt, inasmuch namely as the particles hereof sometimes meeting with an acid Salt both in the *viscera* and Blood, and effervescing therewith, thereby cause the mass of Blood to be fused, and its serosities to be separated and resolved into sweat. 2. Hydrotick Medicines which after a spagirical analysis owe their virtue to these or those elementary particles, being framed out of divers subjects and with a different preparation, are chiefly either Spirituous or Saline, or both together combined one with another, or with some Sulphureous particles. For such as are wholly or for the greatest part Sulphureous, are less accommodate to this intention, because such being generally offensive to the *viscera* do often cause a nausea and sometimes a Vomiting: Moreover those which through plenty of Sulphur are oily and fat, do not so readily insinuate their Particles into the mass of Blood. After what manner, and by what affection of the Blood or Spirits this second sort do move a Diaphoresis, we will inquire particularly: And (1.) to the Spirituous we refer hot waters and all sorts of Liquors endued with a vinous Spirit, such as are commonly distilled by Chymistry out of the fruits or juices of Vegetables matured by fermentation or resolved by putrefaction, as the Spirits of Wine, of the berries of Juniper and Elder, of black Cherries, &c. Such vinous Liquors as these being taken inwardly, both inasmuch as they erect the Animal Spirits and excite them into a greater expansion, and also in that they exagitate the Blood, and (as by the addition of oil to a flame) cause it to be more accended, do procure a diaphoresis. (2.) For procuring a diaphoresis Saline preparations of divers kinds and different states are prescribed with success; which yet do not, like the Particles of an intire mixt, or like the merely spirituous, either by their heterogeneity exagitate the Blood, or by their inflammability accend it, but only by acting upon its Saline Particles, which whilst they snatch into their embraces, they pull them from their too strict combination with others, whereby the compages of the Blood being loosened and the Pulse increased, the superfluous serosities and other recrements may the easilier part therefrom and be sent off by Sweat. To this rank ought Salts of almost every condition, but especially the volatil fluid, fixt and nitrous, to be referred, of which either alone, or compounded with one another, are the Diaphoreticks of the chiefest note made, which being taken inwardly, and meeting with other Salts that are as well in the *viscera* as in the mass of Blood, and calling them out of the embraces of other Particles, do unlock and rarefie the Blood, and thereby dispose to a Diaphoresis.

1. The Diaphoreticks whose bases are the integral Parts of a mixt, wherein likewise an acrimonious or volatil Salt is predominant, do often on this account contribute to the procuring of Sweat, inasmuch as their Particles being received into the Blood, seeing they can neither be mixt therewith nor tamed, do exagitate, greatly divide and part

as it were into small Particles the mass thereof, so that at length the compages of the Blood being very much loosened and wrought into an effervescence, the superfluous serosities, and the recrements and corrupted particles of the Blood are cast forth together with the particles of the Medicine that are to be thrown off because of their heterogeneity. 2. Sudorifick Medicines prepared of the elementary parts of a Mixt, have for their basis either a Spirit or Salt, sometimes simple, sometimes combined with another Salt, or with Sulphur. To Diaphoreticks whose bases are Spirits with other elementary particles combined (as for example, a drachm of *mixture simplex* in a convenient vehicle) are referred those which consist of a Spirit, a fixt Salt, or Sulphur combined; of which sort are the tincture of the salt of Tartar and Antimony, the dose whereof is from one scruple to two in some liquor: Moreover distilled waters, wherein the spirituous particles are diluted with the watry, use to be often given with success for provoking sweat. The doses of the aforesaid waters may be actuated by the addition of Chymical liquors of Salts. Medicines of this sort being endued with a vinous Spirit, are chiefly and almost solely profitable for old men, and for such as are endued with a cold temperament, or are subject to the Palsie or Dropsie: But in an hot constitution, and where there is an heat of the *viscera*, or a febrile effervescence of the Blood, they use to do more harm than good, inasmuch as they rarefie the former and accend this latter too much. The Diaphoreticks, which have a saline basis as they are of a various nature (*viz.* accordingly as it is a volatil, fixt, acetous or nitrous Salt) so they are of a different use and operation: whence in some cases one sort is better, and in others another or another. A fixt and volatil Salt are best for those whose Blood is very full of a serous Humour: Besides, if the liquor that waters the *viscera* and *genus nervosum* do at any time wax eager, as it uses to do in the Dropical and Cacochemical, and those who are subject to spasmodick Diseases, these Medicines are more profitably administered for procuring sweat: for meeting with the acido-saline particles of the Humours and closing with them, they unlock the compages of the Blood, and also through the heterogeneous mixture do exagitate its mass, so that its serosities are more easily separated and driven outwards through the pores of the Skin. 3. Diaphoreticks which have a nitrous salt for their basis, seem to help in the same cases almost as the former consisting of a fixt and volatil Salt, namely inasmuch as they destroy the predominancies of an acid Salt, and so dispose the mixture of the Blood, that while it effervesces, its serum and recrements may be the more easily separated and sent off. 4. Diaphoreticks whose basis is an acid Salt, are chiefly profitable against the predominancies of a fixt Salt or Sulphur. Namely if at any time through the saline fixt particles combined with the Sulphureous or earthy, the mass of Blood become too much locked up and constringed, so that it cannot easily let go its serosities to be sent off by sweat (as sometimes is usual in continual Fevers and the Scurvy) an acid Salt in the Medicine that is given meeting with a fixed Salt in our Body, and snatching it into its embraces, takes away the undue combinations thereof, and so unlocks the effervescent Blood, and disposes it to sweat. 5. Some Medicines that are wholly, or for the greatest part Sulphureous, are commonly reckoned in the number of Diaphoreticks, as namely some natural Balsams, and some factitious ones, also chymical oils, especially those of *Guaiacum*, Box, Camphor, Harts-horn and Soot; likewise the resinous extracts of heavy woods, with many others, which though of themselves they make little towards the provoking of sweat, yet being joined with other saline things I think

Willis
Pharm. rat.
p. m. 196. &
seq.

think them to be not altogether unprofitable, inas-
much as in a colder and too Phlegmatick a constitu-
tion, Sulphureo saline Remedies do rarefie the over
watry Blood and dispose it to a freer evaporation
no less than spirituous things.

III. The bases of a *Sudorifick Diet-drink* are the
decoctions of liquors for the cure of the Pox and
some other chronical Diseases deeply rooted in the
Blood and Humours. For a very intense and fre-
quent sweating (namely daily for a long time) is
requisite for the cure of some Diseases, namely not
only that the impurities and corruptions of the *vis-
cera* and Humours may be carried off, but also that
the morbidick tinctures that are deeply imprinted
thereupon may be wholly destroyed and rooted
out as it were. For this purpose it will not be
enough to give some sudorifick powder or *bolus* now
and then, but an intire Diet ought to be ordered
for this intention: wherefore let all the Drink be
a sudorifick decoction, after one dose whereof taken
also in the morning let plentiful sweating be
provoked, making use besides of the heat of a bath
or hot-House. Moreover seeing by this means
both the pores of the Skin are unlockt, and Nature
also is inclined to a Diaphoresis, all the day after
the recrements of the Blood, and nervous juice
will evaporate by perspiration continued all along
by the use of the same drink. By this method not
only is the French-Pox safely, and for the most
part very certainly cured, but also some other
stubborn Herculean Diseases are sometimes happily
Remedied.

Idem ibid.
p. 202.

IV. A watry and inspid Humour, being easie to
move, may be expelled by any sudorifick: but a
glutinous Humour only by those which withal have
a vertue to incide and attenuate such an Humour. A
salt muriatick, and acid or sour Humour yields chiefly
to volatil Salts, & uses to follow their motion to the
surface of the Body. So that, as I said before of
Vomits, so I ought to say now of Sudorificks also,
that they are diverse according to the Humour which they
carry forth: Which I cannot sufficiently admire that
it has been observed by none hitherto. Amongst
Sudorificks are commonly reckoned the roots of Smal-
lage, Burdock, Angelica, Fennil, Burnet, Zedoary, Gentian,
Contrayerva, Masterwort, &c. all which being Aromat-
ick have hitherto been thought to move sweat in-
asmuch as they incide a Phlegmatick, glutinous Humour
and make it moveable, and withal drive it forward
every way, and so to the pores of the Skin also:
moreover the same roots, of which some are bitter,
others otherwise Acrimonious, do temper and correct
more or less an acid, or sour Humour also, as
likewise a Salt muriatick, and so likewise do promote
sweat which in many Diseases is hindered by them.
Hither ought to be referred the leaves of Card. Be-
ned. and its Seed, Maiden-hair, Scabious, the flowers of
red Poppy, of Elder, Chamomel, Centaury, &c. as also
the wood of Guaiacum, Sassafras, Juniper, Oak, Box,
&c. which all help in like manner, in regard they
either cut rough Phlegm, or alter and correct acid,
sour Humours and the salt muriatick. Hither ought
to be referred all the volatil Salts of Harts-horn, Urine,
sal Armoniack, Bones, Blood, Hoofs, Horns, as performing
the same thing, and helping every way. More-
over the Bezoar stone both Oriental and Occidental, do
infringe and concentrate an Acid; the same is also re-
ported of the stone found in a mans Gall-Bladder: The
like is to be said of Crabs-eyes, Corals, Pearls, shells and
the like, which being used when an Acid offends,
do often provoke sweat. This is true in a special
manner of Opium, which is chiefly in cause that all
Opiats provoke sweat; Opium namely by its bitter-
ness does incide Phlegm, temper acid, sour and Salt Hu-
mours, and so also causes sweat. Terra sigillata con-
tains in it that which tempers all sorts of Acrimony,
on which account also it seems to promote sweat-
ing. Antimonium Diaphoreticum and Bezoardicum Mine-
rale, in regard it is rendred fixt, and indeed by

Sylv. de le
Boe m. m. l. i.
c. 11. §. 8. &c.

reason of its Sulphur, does temper every thing that
is acrimonious and reduces it to mediocrity, and so
also promotes the driving forth of sweat. Mercurius
precipitatus Diaphoreticus, made of sublimate corrosive
Mercury dissolved in water by boyling, precipita-
ted and sweetned by pouring thereto the oyl of
Tartar per deliquium, does also promote sweat by dis-
solving glutinous Phlegm, whence it is also good
for obstructions. ¶ The use of Sudorificks is pro-
per for such Diseases whose cause Nature often
thrusts forth to the habit of the Body by a sponta-
neous motion: Otherwise sweat is not to be pro-
voked indifferently both on the account of the
Diseases and of the Sudorificks themselves. If
there be thin, watry nitrosulphureous, acid, salt,
&c. Humours in the Body, and they be made apt
for excretion by digestives, or if others abound
which may be easily attenuated by Medicines, 'tis
safe to make use of Sudorificks, especially if the I-
dea of the Disease, the strength of the Body and
the disposition of the inward viscera be answer-
able.

Idem §. 14.
& seqq.

V. Fat men are not rashly to be soaked with
sweating: the lean that have a soft and loose skin
are most disposed to sweat.

Frider. Hof-
man. m. m.
lib. 1. c. 11.

Vidus vidui
l. 11. de
cur. generat.

VI. Not all humours are profitably lessen'd and
evacuated by sweat, but only some; not blood,
nor choler, but all sorts of phlegm, and all Serum
as well the watry, as the salt Muriatick, the acid
and sour. But glutinous phlegm, seeing it is not
so fit for motion, ought first, or at the same time
to be incided, attenuated and made fluid, that it
may the more easily be driven forth by or with
sweat: so an acid sour humour ought to be prepa-
red for its expulsion by sweat. That the menti-
oned humours are driven and expelled through
the Pores of the skin and so by sweat, appears
from the sweat it self, which sometimes comes
forth glutinous, often watry and inspid, some-
times muriatick or brine-like, sometimes also
somewhat acid or sour: and I think that there
sometimes, though but very seldom, flows forth
a sweat that is bitter; though it has never been
observed by me or others that such a sweat has
been procured by art and by the help of Medi-
cines, but that it has been spontaneous.

Sylv. de le
Boe m. m.
l. 1. c. 11.

VII. There are but a few true sudorifick Medi-
cines, and amongst these Opium is the chief: for
the reason why Treacle or Mithridate cause sweat,
is wholly from the Opium that is mixt with them.
I know by experience that these two Elestuaries
prepared without Opium, do not provoke sweat at
all.

Walent
m. p. 65.

VIII. I have often observed that Melancholick
persons who have had a very hot Liver, have be-
come Leprous by the too much use of Guaiacum:
and I have seen others that have had an hot Liver,
to get the Jaundise and other very ill Diseases
by a decoction thereof, unless it were very small
and made of Wood that grew far from the
bark.

Gesner. in
Epist.

H. ab Heerl
Obs. 22.
where is a
Story of a
young Man

IX. The Body ought to be prepared two ways
that it may be made apt to sweat: 1. by lessening
the quantity of the Humour; 2. by rendring all
the Body soft and loose, and opening the pores;
3. by so attenuating the thick Humours that they
may easily penetrate through any passages. Yet
we must shew which way that can conveniently
be done, seeing many are miserably tormented in
vain with Sudorifick preparations and Bed-cloaths,
whereby the faculty is rather wearied than any
benefit accruing thereby. Now the Medicines
which prepare the Body for sweating ought to be
the same as those which provoke sweat it self, such
as warm the Humours by their heat and moisture:
yet there is this difference, that upon taking the
Medicines which are for preparation, the Patients
are by no means to be compelled to sweat, but to
compose themselves to rest or sleep, without lay-
ing

that became
leprous from
a repeated
use of the
Decoction of
Guaiacum.

ing on them any more cloaths than usual; and these I use in this manner, I give the Patient a sufficient quantity of some decoction a little more than lukewarm betimes in the morning, and forbid him to sweat; and I give the like draught again a good while after a light supper, and the next day betimes in the morning I administer a Sudorifick, first ordering the Patient for sweating by covering him warm.

¶ Before the Humours offending in the Body be apt and disposed for expulsion by sweat, sweating is endeavoured with the prejudice and hurt of the Patients, for there will either none come forth, or not save that which is violent, whence the sick person will be necessarily weakned. As often as a Physician endeavours this, so often he betrays himself to be unskilful in his art. A Physician that minds his business, will not find it hard to avoid this inconvenience; if 1. from the Symptoms that are present and the preceding diet he find out the true fault of the Humours; if 2. (when Sudorifick Medicines shall be fit to conquer it) he chuse such as may produce the desired effect; if 3. he do not very much force sweat, but by dealing gently observe whether the Body be rightly and sufficiently disposed to cherish a sweat and after the use of the Sudorificks expect the further preparation and correcting of the Humours: For if he used such Sudorificks as were fitted for the correcting and amending of the offending Humour, though no sweat followed, yet he will do good in amending of the vitious Humours, and preparing for a more easie sweating afterwards. For Sudorificks that are fit for altering and correcting of vitious Humours, are always used with benefit, if the Body be not too much loaded with Bed-cloaths.

X. The most convenient time for sweating is the morning, and that on an empty Stomach: for then the sweat comes forth more easily and plentifully, nor is there danger of any harm, which we should deservedly fear if sweat were to be procured after aliments lately taken. For it is one thing at dinner and supper or a little after to take the fore-said decoctions, not to procure sweat, but to cut and correct Phlegm and temper acid Humours; and another thing to use them for expelling sweat presently, and that powerfully: for as I approve of the former, so I disapprove of this latter.

XI. In provoking of sweats Art imitateth the wonderful artifice of Nature: for in Fevers and other Diseases the never evacuates by sweat all at once, but at several times and by intervals, which is proved by long observation, namely part of the phlegm and choler being by degrees attenuated and turn'd into *halitus* for the greater part. Therefore as it is impossible to Nature, or however difficult, to attenuate all the offending matter at once, so as that it may burst forth into one only sweat; so Art ought to take example by Nature.

XII. Yet Art differs from Nature in this sort of evacuation, because she never attempts sweating safely and to health, but in acute Diseases as being caused by thin Humours and such as may easily be further attenuated and turned into *halitus*: but Art never bids us procure sweat but in the most difficult and long Diseases, though they be caused by a thick matter. The reason is, because acute Diseases do wholly refuse Medicines that provoke sweat; for seeing such Diseases are hotter than they should be, they are very much exasperated by those Medicines which are also hot.

XIII. Those who have hot Lungs, have thin Humours, and are therefore prone to sweat: so we see the Phthical to sweat almost continually, and to be weakned so much thereby, that the Physician is necessitated to hinder their sweating. ¶ Those do amiss that provoke sweat in Dropical persons by a decoction of *Guaiacum*: For you shall sooner draw water out of a stone, than sweat from a withered or refrigerated Liver.

XIV. Those are ill advised who order their Patient to continue his sweat for four or five hours: one hour or two at the most is enough. We must take heed the flesh be not colliquated by too great a *diaphoresis*, and so instead of doing good we do more harm. It is tyrannical counsel to digest the Body by sweat, whilst the soul faints and languishes. Prosecute sweating so long as Nature can bear it without languishing: an argument hereof is a full and free pulse. Concerning an hydrocathartick diet see the title of *purgation* § 52.

XV. Daily experience shews, that Sudorificks being often taken, I mean such as are gentle, and the Patient covered indifferent but not over warm, sweat that came not forth at first will issue out afterwards, and that to the great benefit of the Patient. Moreover if the pores in the surface of the Body be straitned by the external cold, or rather Phlegmatick Humours be coagulated there that obstruct the pores and so hinder sweat, by taking Sudorificks prepared of Incisers, the said Phlegm will be dissolved again, the obstruction will be loosd, the pores will be opened, and a way will be procured again for the sweat that is afterwards to follow.

XVI. Galen 8. meth. c. 8. for the cure of an *Ephemeric* or *Diary* Fever caused by a constipation of the pores, commends absterfion for the provoking of sweat: which advice that it is good is manifest, because if the sweat be absterged or wiped off, and so do not obstruct the pores or breathing-places of the Body, it occasions the arrival of more. Besides, absterfion is made with rubbing, which calls out the heat, opens the pores and draws the Humours from the centre to the circumference. On the contrary *Paulus* (l. 2. c. 47.) affirms, that sweat bursting forth in a Crisis is to be received so long as till there be enough evacuated: for he says that sweat helps with an indifferent heat and rest, so that it be neither wiped off, &c. And afterwards, But when sweat has issued forth largely, then it is convenient to relieve the Patient by wiping of him and taking off some of the Bed-clothes; for immoderate sweating wearies the Patient and often causes fainting away, &c. If therefore he be to be wiped that sweat may not be provoked, then he is not to be wiped for the procuring of it; for sweat by its heat keeps the pores of the Skin open and draws the Humours to the habit. Reconcile them by saying, That *Paulus* forbids much and hard rubbing, which according to his opinion depresses, dissolves, and debilitates the bulk of the Body, and makes Bodies more dense and unapt for sweat; and that *Galen* is to be understood of that which is soft and gentle.

XVII. When the Blood stagnates and stops in its Vessels, motion is most happily procured to it by Sudorificks, sometimes by Venesection: by the help of those the Blood is not only made more fluid and moveable, but the same is moreover actually moved, and more and more rarefied by the volatil Salt that is in them and by its stay alone does by degrees loose the Blood more or less concentered by its own acid Spirit and therefore agitates it. Whence a more frequent and greater pulse uses to be the companion of sweat; for whilst the volatil Salt of Sudorificks arrives at the right ventricle of the heart, and the Blood there becomes more rare, and does not only of its own accord seek an exit for it self, but by further widening the ventricle of the Heart, it excites the same to both a more frequent and stronger contraction of it self, and therefore moves the Blood more than before was somewhat deficient in its motion, and promotes its course every way from the Heart.

XVIII. Not only Medicines taken inwardly, yea and hot drink drunk freely provoke sweat, but many external things also: Thus the air alone heated by art and making a dry bath in a stove, or sitting by a good fire, powerfully draw forth sweat;

X x x x x

Rölsinc. Met.
p. 576.

Sylv. de le
Boe append.
tract. 7. §.
311.

Mercat. de
præsid. med.
usu.

Sylv. de le
Boe Append.
tract. 4. §.
225. & seqq.

Idem ibid.
§. 244.

Idem
c. 12.

Idem ibid.

Walæus m.
m. p. 66.

Enchir. med.
Pract.

Sylv. de le
Boe pract. 1.
l. c. 34. §.
29.

and when a watry humidity is redundant in the Body, it is driven forth by sweat this way easily and happily enough, but so is not a *scurvy*, or *acid*, or *Salt Muriatick Humour*: though a glutinous Humour may thus also be both attenuated and expelled by sweat, if so be it be continued long enough, lest the same Humour being dissolved by the fire and driven all about be again coagulated in the capillary Vessels and there breed obstructions and many mischiefs that follow thereupon.

XIX. *Bezoardicum minerale* is prepared of the Butter of Antimony, by pouring thereon the Spirit of Nitre or *aqua Stygia*. Where it is to be observed, that whilst these two liquors are mixed together, the Salts meeting by and by with one another are strictly combined, and in the mean time the Sulphureous particles, which are in great plenty, being utterly excluded fly away, & carrying some saline Bodies with them raise an heat and very stinking smoke: these being driven away, the saline that are left are more strictly combined with some earthy ones of the Antimony, and at length having undergone the fire, that the Emetick Sulphur may wholly exhale, and the corrosive stings of the Salts may be destroyed, they make an excellent Diaphoretick, inasmuch namely as the different Salts of the Medicine do meet with the Salts of our Body, with which being joined, the *compages* of the Blood and Humours are loosened, so that there lies open a free passage to the serous recrement. The dose is from a scruple to a drachm.

XX. Though a certain preparation of Antimony be called *Diaphoretick*, I know not to what sort of its particles this vertue can be attributed; and I have often in vain expected such an effect from this Medicine. It is often profitably given to stay fluxions of the Serum or Blood, because this earth being deprived of its proper Salts, does imbibe strange acid Salts, which it meets with by chance in the Body: which kind of vertue *Crocus Martis* prepared by a reverberatory fire seems to obtain from the like cause.

XXI. *Antimonium diaphoreticum* is rightly given with the species of *hyacinthopulvis ruber Pannonicus* and others for the promoting of expulsion. But we must note that it ought to be rightly and newly prepared, for as it grows old, it returns to its own Nature and Emetick vertue. Wherefore I advise never to mix Antimony with those Powders but at the time when you are about to use them, for till then 'tis best to keep them apart.

XXII. Let Physicians be mindful that those who are engaged in a Diet of *Guaiacum*, if they be not Purged every 8th or 10th day, and unless they go to stool every day once, do incur very grievous Symptoms.

XXIII. Most now esteem that Paradox for truth, that Decoctions of *Guaiacum*, *Sassa*, *Sassafras*, *China* and the like make People fat: Which *Horat. Guarantius* in his *resp. medic.* p. 235. thus explains: These Decoctions do attenuate indeed and dry up naughty and excrementitious Humours, but leave the good and profitable untouched: Therefore they bring no hurt to the wasted and emaciated. For seeing leanness and a fleshless habit proceed from bad nutrition, and bad nutrition from acrimonious and salt Humours which consume the sweet and profitable Blood, and hinder the Fat from being agglutinated; therefore it follows, that when those vitious juices are consumed by the foresaid Decoctions, the Body is of course rightly nourished and fatted. Thus far *Guarantius*. *Arceus's* way of curing Phthisical People by a Decoction of the Wood is well known, whereby he affirms they are not only hurt, but also grow fleshy.

XXIV. There are some who with an hydrotick Decoction give a Bolus of Turpentine and Ground Ivy, &c. but I like not the raising of two motions at the same time: therefore rather make a Bolus of

the powder of Harts-horn, Vipers and some appropriate Salt.

XXV. Besides *Opium* Salts promote Sweat, namely by their fufory quality; but 'tis necessary they should be depurated: whence common Salt and *sal gemma* promote it not at all. All Herbs that contain much Salt in them, drive forth also much sweat, as Wormwood, *Carduus bened.* being given in a sufficient Dose.

XXVI. It is an error of the Moderns to use Decoctions with water for fluxions, seeing it is clear that whatsoever Remedies are taken under the form of drink, though they be of a dry Nature, yet they alwayes increase moisture in the Body, especially if they be taken at Meals. Now I guess that the Physicians our predecessors were deceived by the Diet that uses to be prescribed to them who use *hydrotick Decoctions*: Who having observed that some troubled with long continued distillations, were cured thereof by a Decoction of *Guaiacum* or *sassaaparilla* or the like, which they had taken for the cure of the French Pox, brought in Decoctions of drying Woods and Roots, which had not at all been used for this purpose before, for the cure of Distillations: and the cure succeeded happily as long as they observed that exact Diet of thoroughly-baked Bread (or Bisket) with Raisins, limited to a certain quantity, and wholly abstain'd from drinking of Wine: But after that our Physicians indulging the complaints of their Patients, began to allow them Flesh, Eggs and Wine, it has been seldom observed that Distillations have been cured by these Decoctions: which is an evident argument that the Catarrhs were cured formerly not by the vertue of the Decoction, but by the drying Diet. Which yet not observing, and referring the difficulty of the cure to the stubbornness of the Disease, they will not yet give over such Decoctions; nay by repeating them often and adding dry Bals also, whereby they draw the moisture to the Skin with violence, they torment the miserable Patients with sweating, and which is worse, very oft by burning the Humours and perverting the natural temper of the viscera, they make those Catarrhs acrimonious and salt which of their own nature were mild and placid: Not considering that *Hippocrates* (1. de morb. mul. sect. 3. v. 183.) used a clean contrary way for the bringing out of the same moisture.

XXVII. In making the Decoction of *Guaiacum* we must have special care that the oily & acid Spirits, that otherwise by reason of their thinness are very apt to exhale in the common boiling of Apothecaries, may be preserved as much as they can by art, because the Sudorifick vertue of the *Guaiacum* consists most in these, which vertue is increased if the Salt extracted Chymically from the calcined faeces be mixt therewith.

XXVIII. Those are much mistaken who think to draw out all the vertue of the Wood at the first Decoction: for the second Decoction is sometimes stronger than the first.

XXIX. *China* and *Guaiacum*, seeing they are of an unlike nature, are not to be mixt together: which I chiefly gather from the duration of each Decoction. Because the Decoction of *China* continues not good above 24 hours, but will presently putrefie; but a Decoction of *Guaiacum* will continue good even for eight days. You will say that the making a Decoction of these two in no greater a quantity than may be spent in one day, will prevent the danger of Putrefaction: I will admit this indeed, but this is no reason why the mixture of these two together should not be suspected, because the Decoction of *China* being so apt to putrefie, exercises its Operation: and if any thing be added which may change the nature of this Decoction, its operation will be changed also, which is always joynted with the proper nature of the Decoction. And

Fortis Cent.
1. Conf. 65.

Prosp. Mart.
rian. com. in
dist. loc.

Gr. Horst.
Decad. 2.
q. 9.

Crato apud
Scholtz.
Epist. 158.

Idem m. m.
1. 13. c. 11.
§ 27.

al. ab. vlt.
Inn. 17. c. 11.
§ 27.

Willis.
Pharm. rat.
p. m. 208.

Ign. Franc.
Thiermain.
conf. 1. 1.
c. 7.

Heer de A.
cidulis p.
100.

Hor. Angen.
tom. 2. l. 2.
p. 379.

I would say moreover that experience teaches that these two Medicines do not endure one another: when to pleasure some Physicians I have admitted of their mixture; truly I never saw them do well.

XXX. A Decoction of China requires not that strictness in Diet as a Decoction of Guaiacum or Sassa: For the Indians and Spaniards follow their business even without doors whilst they drink this Decoction, and eat any thing that comes to hand, even Fish: But we in Italy never grant our Patients so great liberty, because we permit them not to go out of doors, nor to eat Fish, or eat many other things which healthy Persons use; though we are much against a very strict order in Diet, which I commend again and again in the use of the Decoction of Guaiacum.

Idem ibid.

Bened. Syl-
var. conf. 38.
cent. 1. and
conf. 87. cent.
3.
Walaeus m.
m. p. 67.

XXXI. Sassafras would be good for many Diseases if it exhaled not too much into the Head.

XXXII. Carduus bened. operates more in substance than in Decoction: where five ounces of the Decoction were convenient, give a drachm of the powder.

XXXIII. We must observe concerning the Roots called Aperient, that some Practitioners mix them sometimes with provokers of sweat, as in the small Pox (perhaps that the Humours may be attenuated, and more happily and easily resolved into sweat and vapour) which truly is to be done but in a small Dose, to two or three ounces at most, otherwise they will lead the attenuated Humours to the ways of Urine which diminishes sweat; for which purpose the Arabians mix them with a Decoction of Lentils.

Morellus de
form. rem.
c. 1.

XXXIV. 'Tis to be esteemed no small matter that an Humour offending in the Body may be both corrected and expelled by the same Medicine; which 'tis strange should be denied by any, and those daily buied in practice, who therefore are willingly ignorant of what they might easily observe. For there are not a few who from a very gross prejudice think, that not only Purgers, but also Sudorifics themselves, as often as they do not move the Humours by Stool or Sweat, do a great deal of hurt, and cast the Patients into great dangers. This opinion of theirs, as I was heretofore solicitous about it, so I now laugh at it as vain, since experience has often taught me the contrary. Therefore there is nothing more false, that I say not more hurtful to the Patients, than to think, that Sudorifics especially do harm as often as sweat follows not upon the taking of them. I confess indeed if upon taking a Sudorifick the Patient be covered with a great many Bed-Cloathes, and be kept a long time under them, he will be uneasie and ill, from the Bed-cloathes more than from the Medicine he has taken: but that is not to be ascribed to the Sudorifick Medicine it self, but to the preposterous use and ill administration of the same. ¶ Therefore Sudorifics prepared of inciders and attenuaters, and given at several times, do loosen and incide both the Humours themselves that are to be driven forth by sweat, when they are viscid, and also others that are mixed with them and are likewise viscid, as likewise others that are coagulated in the pores and surface of the Body, and dispose them all by degrees to the Sweat that is to follow,

Sylv. de le
Boe append.
tract. 3. §.
219. &c
segg.

Idem tract.
7. §. 320.

Suppositories.

The Contents.

What such they ought to be. I.

'Tis unprofitable to make them very long. II.

I. Neither let Suppositories be too acrimonious nor too frequent; Not too acrimonious, lest by their irritation they open the hemorrhoidal Veins, seeing that part is very sensible: Whence though they may be made even of crude Alum, yet seeing such are too acrimonious, they are to be made use of warily. There is the like reason of others. Nor ought they to be too frequent, for by Nature's being accusom'd to them the Sphincter becomes more dull, so that it will promote excretion unless solicited thereto; which holds also of Clysters. I have sometimes observed this in Infants, in whom Suppositories being frequently used in a continued continuance, have as it were by accident the more increased it, inasmuch as the sense being hereby made more dull, seemed to require ever and anon a new application.

Wedel.
pharm. p.
143.

II. They are made round like Candles, nine Inches long, whence they call them Candles from the similitude. But so great a length is wholly unprofitable, seeing Suppositories irritate not the expulsive faculty saving where they touch the *podes* or extremity of the straight Gut, for that part is the most sensible. Make them therefore not half that length, and about as thick as ones Finger, sharp at both ends, that they may be the easier thrust in and pull'd out again.

Rondelet. p.
m. 876.

Suppuratives.

The Content.

They are not proper for all Tumours.

Suppuratives are profitable for sanguineous Tumours, which are their *Indicant*; because extravasated Blood is turned into matter. But such Tumours as are not of the nature of these do not so much require them, or if the collection of Blood be not so great or raise not so great a Tumour but that it may be dissolved or pass back again into the Veins: whence in an *Erysipelas* (7. *aph.* 20.) one shall not use them without harm. So in Malignant and Poysonous Tumours they have hardly any good success; but they are least profitable in Melancholick Tumours, as in the Cancrous. Likewise they are not so convenient in Parts weak by Nature; nor have they place in internal Parts if there be an extravasation any where, but in such case we must only resolve, for instance in the Pleurisie: so that Suppuratives are proper only externally; and internally such things indeed as ripen and concoct the Humours, are profitable, but so are not Suppuratives. But their chief use is in Byles, Abscesses, and Tumours that turn to these, arising from a conflux of Blood, or however not without Blood, as in Glandulous Tumours, which are also hard to suppurate.

Gr. W. We
del. de f. m.
fac. p. 68.

Thoracicks;

Thoracicks, Pneumonicks.

(See l. 14. *Pectoris affectus in genere*, or the Diseases of the Breast in general.)

The Contents.

They respect either the ways; I.
Or the Humours; II.
Or the expansion hindered. III.
Their matter. IV.
Inciders and incrassaters are not to be confounded. V.
Bechicks are not to be confounded with Resolvers. VI.
Astringents are to be added to Resolvents. VII.
Too great driers are to be avoided. VIII.
As likewise too great looseners. IX.

I. **T**horacicks respect either 1. the ways or passages, that are necessary for letting in and expelling the air, which they clear, and free the pipes of the Lungs from what stuffs them, such as are both inciders and attenuaters, whether indued with a simple volatil Salt, as Aron, Lobelius's Syrup of Erysimum, or with a Balsamick oyl, as Honey, which are good in thick, tough, clammy flegmatick Humours, in the Asthma and wheezing Cough; and also lenients and smoothers, Syrups, Lohochs, &c. which are most useful in an hoarseness, and in a cough also in general.

II. Or 2. the Humours, whether thick, such as are the aforesaid inciders and detergers; or thin Acrimonious, salt, destilling Humours, such as are things earthy, mucilaginous, Opiats, Bole-Armene, Mastich, Frankincense, Treacle, which are good for Salt and thin catarrhs, spitting of Blood, &c. or Humours declining to Putrefaction and an Ulcer, such as are things resisting Putrefaction, Balsamick, earthy precipitaters, never omitting smoothers, and vulneraries and consolidaters, as there is occasion, which are useful in a Phthisis.

III. Or 3. expansion hindered, and that as in other cases, so chiefly when the afflux and irruption of the Humours attempts an inflammation and abscess, in which case besides universal Diaphoreticks that reduce the Blood into order, Medicines resolving the coagulation are good, such as are most Antipleuritics, Antimonials for the greatest part, and such things as are profitable for a fall from on high. These very things oft shew Nature another way, so that what is ordinarily expectorated by cough, uses to be deposited by stool. But in all these, expectoration is never to be neglected, but the promoters hereof retain their due praise.

IV. Their matter as I have said above, consists of 1. Acrimonious volatils endued with a volatil Salt, as the Root of Aron, Sea-squill, Mustard, Erysimum; likewise bitter things, as Scordium. 2. Things endued with a mild volatil or oily Sulphur, as the root of flower-de-luce, of Fennil, of Elecampane, Sun-dew, Aniseed, Sassafras, Amber, Benzoin, distilled oyls. 3. Sweet and roscid mucilaginous things, Sugar-candy, Syrups, Lohochs of all kinds, Honey, Lykorrhize, which two classes contain most Bechicks or Pectorals, not omitting resolvers sometimes. 4. Resolvers, and partly such as dry lightly, and partly such as promote expectoration, as Crabs-eyes, sperma ceti, Bores tooth, Antimoniam Diaphoreticum, Gummi Ammoniacum, Amber, asthmatick waters, Chervil. 5. Earthy precipitaters, absorbers, consolidaters, as Scabious, Colts-foot, Bluellin, Antimonium Diaphoreticum, Poterius's Antibeticum. Hither belong also 6. the more temperate mucilaginous things, Marsh-mallow, Jujubes, Se-

bestens, Gum Arabick, Tragacanth, Bole-Armene. The rest, as 7. watry dilaters, and 8. astringents appear by what is already said, and some of them are common. Likewise 9. Opiats, Diacodium, &c.

V. In Diseases of the Lungs, the order of Thoracicks that incrassate and incide is not to be confounded nor inverted; that is, Incrassaters are not to be given, where viscous, clammy, phlegmatick Humours offend; nor inciders and attenuaters, if there be a destillation of such as are thin, salt and Acrimonious.

VI. Nor are Bechicks to be confounded with Resolvers, yet they may be conveniently mixed with one another as there is occasion; as for instance in a Pleurisie and Asthma 'tis best to use Resolvers more, and in a Cough or Phthisick Bechicks. But he that presumes to cure the Pleuritical with Bechicks alone, especially with *linctus*'s shall kill his Patient; and he that will cure the Asthmatick thereby, shall expose him to no less danger.

VII. In Diseases of the Breast we must not bind without Resolvers, namely 1. that provision may be made withal for the grumous Blood, as in the *Hæmoptysis* (or spitting of Blood) which is done by Crabs-eyes, though taken only in a secondary dose; both intentions are also satisfied by Corals, Bole-Armene, terra sigillata: 2. that the tone of the Lungs, which naturally ought to be loose, may be regarded by this means, and expansion not hindered.

VIII. Things also that dry too much are either to be avoided among thoracicks, or to be mixed with moisteners; as for example, Antimonium Diaphoreticum, Poterius's Antibeticum dry more, as also common Sulphur, the flowers of the same, the pure Sulphur of Antimony. Hence also fresh pectoral plants are better when we would moisten and absterge more, as for example, in a phthisis or the like; but when we would consolidate, as in spitting of Blood, then those which are more dry.

IX. Too great looseners, whether inwardly or outwardly are likewise to be avoided: for they both debilitate the tone, and spoil the Stomach, and themselves cause a want of appetite: whence it is not adviseable to use pectoral *linctus*'s in great plenty & for continuance. These by further widening and dilating, dispose the more to a reception of an afflux; whence there ought to be a caution also in pectoral ointments.

G. W. Wedel de f. m. fac. p. 89.

Topical Remedies.

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Let not Refrigeraters be immoderate. XVIII.
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I. Let's not, with the vulgar Physicians, always begin with evacuation of the Body, without any distinction. Therefore we must know that there are four sorts of Diseases to which our Bodies are subject, and that we ought not either to admit of or require that Providence in them all.

1. An intemperature of the habit sometimes happening to a Part does vitiate the Aliment without any access of Humour; in which regard the cure is performed by Alteratives only without the administration of Evacuators: yea in the same Distempers it is often found that Purgers do harm, as also Bleeding.
2. It often happens that the *sex* and vapour of an Humour settled in a Part, does defile and vitiate the Humour that arrives thither: this sort of Ail requires not the agitation or purgation of an otherwise healthy Body, but the ridding and discussing of the matter that is settled in the Part, by evaporating, sudorifick and deobstruent Medicines: for this kind of Malady occurs frequently in many periodical Diseases and Agues; for there is left somewhat feculent, whilst the Body is pure and purged, in a Gouty Person in his Feet, in a Nephritick in his Kidneys; in an Asthmatick in his Breath, in a Tertian or Quartan Ague in the place of their Origin, keeping the Period of a lingering but long continuing Fever; for that which is left when the cause is taken away, is not always put to flight by a purely contrary alteration, there often remains indeed a portion of the Humour settled in the Part, which unless the Physician dissipate by Digestives, he shall use Alteratives in vain: In which as Purgations do often more harm than good, so Topicks bring manifest help.
3. It often happens that the affection of the Part is material, and depends not on the whole, but on some superiour member, as a Disease of the Breast on a fault of the Head: In which kind of Malady 'tis necessary that a Providence precede, yet not of the whole Body, but of the Part which first sends the fluxion. Wherefore neither are those to be hearkened to, who that they may seem to have purged the Head the more regularly, do first without any need disturb the whole Body with Purgers.
4. There remains only a fourth difference of a material Malady, depending on the whole, which justly requires that the Body be evacuated by Purging or Bleeding before the application of Topical or local Remedies. Whence it is clear that Galen 1. *met. 7. 8.* said true speaking of an *Alopecia*, That a particular Disease, if it be light, is cured by Remedies applied only to the Part affected, &c. ¶ When we say this is to be done before the other, it is not so to be understood, as if we should abstain altogether from this, till the other be perfected: we erre greatly this way in acute Distempers. As for instance, Local Remedies are not to be applied before we have made Provision for the whole Body; nor must we use attemperaters before evacuation; what then? shall we apply nothing to the Head or Hypochondres in a Phrensie or an Inflammation of the Liver, till we have let exactly so much Blood as is necessary? Indeed before we have let Blood 'tis not good to apply any thing to the Head or Liver; yet neither must we tarry for an intire and perfect evacuation of Blood before we apply Repellentents; but beginning the cure always with those things which according to Art ought to be

first, we may interpose these other, &c. ¶ Indeed practical Precepts are never to be taken universally, but they are to be moderated by the indication of urgency. For Galen affirms this also, That the Body is to be evacuated before we come to Topicks; yet in any dangerous Inflammation we never abstain therefrom till all the Blood-lettings have preceded; but when we have bled once or twice, we begin to apply those things which seem fitting. So often in the same inward Inflammations, when they did not yield enough to revulsion, and I was afraid there might be great danger in the greatness of the Phlegmon, by using bleeding on the same side, and Cupping-glasses upon the Part with Scarification, by turns, I think I have preserved some from Death to admiration, when other Physicians were for delaying, and observing a Method that is not always profitable. ¶ Galen was so afraid of a Cacochymie, that he forbade applying Local Remedies to the Part affected in Cacochymical Bodies, unless they were first cleared by Purging and Clysters and Fasting; lest the corrupt Humours rushing into a Part though but lightly affected, might suffocate the innate heat thereof, and the Disease of the Part, that otherwise were not dangerous, might become deadly. ¶ If the offending matter be in the Part affected in some little quantity, then there is no inconvenience in strengthening the Part; because when the Part is strengthened, that little which is left, is easily resolved by Nature. Thus Galen (14. *Meth. 9.*) says that in the beginning of a Cancer the Excrement, if it be but small, is to be repelled to the principal Parts; because unless it be suddenly repelled, the melancholick Humour presently distends the Veins, and by their being extended the Cancer is rendered incurable. Likewise (*cap. 17.*) speaking of an *Herpes* he says, If some part of the Excrement be repelled to the principal Parts, a little thereof does no hurt, because it is resolved by the *viscera*.

II. There are Nine cases wherein Repellents are not convenient: 1. When the Humour flows to the Emundatories: 2. When the matter is Poisonous: 3. In a critical Motion: 4. When there is a Plethora, or Cacochymie: 5. When the Part is so weak that there is danger of extinguishing its heat: 6. When the matter flows to a Part that is near to a principal one: 8. Whilst the matter is fixed: 9. When the Tumour is caused by congection. Two other cases are proposed by Guido, which may be rejected: the one is, when the Disease proceeds only from an external cause; the second, when there flows only a thick Matter: The first case is very vain, because in Wounds we forthwith use Repellents; The second is opposite to Galen who (14. *Meth. 17.*) says, That some Repellents are cold and moist, fitted for cholerick Humours; and that others are cold and dry, which are stronger, because they bind, and these are proper for Phlegmatick and thick Humours. The same is confirmed by Galen (6. *de med. local. c. ult.*) where in yellowish ichors he uses Repellents that are rather cooling; but if from Phlegm, astringents. ¶ Repellents do not only exert their vertue upon Diseases from a fluxion of hot and thin Humours, but they also fight against cold Distempers and Fluxions. For thus does Galen (2. *art. cur. ad Glau.*) bid us cure *Oedema's* (or Phlegmatick Humours) namely by using Repellents in the beginning, though such Maladies proceed not from a thin and hot Humour, which kind he proclaims a thousand times requires Repellents.

III. Is the efficacy of Repellents such, as to cause that to be resumed into the Veins, which was slid out of them into unnatural spaces? That this is possible, is proved, 1. By the breakings out; or pimples in Children, which are often hid on the sudden by the repercussion of the cold Air: 2. By the authority of Galen (1. *art. med. c. 85.*) But emptied

Y y y y

Mercat. de
 Ind. Med. 1.2.
 c. 1.

Vallet m. m.
 1. 3. c. 2.

idem 6 Epid.

Fortis con-
 sult. 99.
 Cent. 4.

Sanctor. de
 Remed. inv.
 c. 15.

Sanctor.
 Meth. 3. c. 3.

Mercat. 499

plate)

places draw to themselves. An inflammation of the Liver or Spleen is cured by letting Blood in the Arm, though in the Liver the Blood is forcibly dispersed out of the *Porta* through the fleshy Pores. In those who are anointed for running Sores, Scabs, and the French Pox, 'tis wonderful how suddenly those thick Pustules, Tumours, Nodes are transmitt by Vessels to the Mouth to be spit forth in Salivation: The cure also of an *Echymosis* shews the same thing, which is performed for the greatest part by Repellents; where there is no doubt but the Blood is extravented, and that it does return into the same again by the help of Repellents.

Idem ibid.

IV. Let not the Physician persist so long in repelling as till all the Matter retreat that was flown into the Part; but let him either mix other Remedies with Repellents, or use some other Remedy: for it is dangerous and bad to persist very much in cooling of the Parts; for often the Malady is either changed into one of a worse species, or the Part perishes.

Idem ibid.

V. Some do so carefully observe the mixing of Resolvents when the beginning of the Disease is over, and increase them as the Disease increases, till in the state they use them alone, that they can be persuaded by no accident, nor by any necessity that supervenes, that it is fit to do any thing else, always taking the indication for their so doing from the time of the Disease. By which it appears that they have understood *Galen* amiss; who though he did not only receive, but set also much by the indication from the time of the Disease, yet he does that only for knowing the nature and state of the Disease; but does not reckon this indication amongst the Curative, as being quite different therefrom. As the preceding cause is not to be taken care of, but the present Disease of the Body; so neither is the time of the Disease, but its condition to be examined for an intention of cure. Thus in the beginning of an inflammation, because the vehemence of the fluxion is known from that time, 'tis understood what occasion there is for Repellents, not indeed upon the account of the beginning, but of the Fluxion: for if the Fluxion return in the declension of the Disease, *Galen* persuades us to repeat Repellents. To be short, He measured the use of Repellents and Resolvents according to the indigence of the Fluxion or the Humour already flow'd, &c.

Idem ibid.

VI. We ought to know that those erre very much, being deceived with the shadow of a Reason, who use a great deal of Wax in discussing Remedies, and mix other Emplastick Medicines therewith, thinking that by its sticking fast it works the more effectually; not knowing that the whole business of resolution is performed through the Pores of the skin, which themselves shut up by such Medicines.

Idem c. 16.

VII. Astringents being added to Digestives help their penetration: but by Astringents the strong are not to be understood, as Galls, *Acacia* and the like constipaters of the skin; but the most moderate, as *Mastic*, *Roses*, &c. which by a certain expression help towards the greater penetration. This is confirmed by *Averroes's* Experiment; If one take leather and anoint it on one side with common Oil, and on the other with Oil of *Roses*; then the Oil of *Roses* will penetrate sooner than otherwise it would do, and yet it hath a moderate astringing vertue.

Sancr. Art. parv. cap. 95.

VIII. *Burhus*, an Italian Physician, makes all his Plasters of volatil matter, so that the Ointment that is laid on one day, will hardly any of it be found the next: and he blames Physicians for making those thick Bodies into Plasters which cannot enter in at the Patient's Pores.

IX. Bath-clays are commended for softening confirmed Tumours; but with these Cautions, 1. That a great quantity thereof be applied; 2. That

they stay a good while on the Part; at least four hours in the morning, and as many at night; 3. That they be spread wide, so as to cover not only the Part affected, but the neighbouring both above and below. Let the like Cautions be observed in Plasters, with which if we would soften hardened Parts, we must not apply them by scraps but spread them large: By this artifice I have known some Mountebanks do miracles in the cure of Tumours, when yet they used only the common Remedies that every old Woman and Barber knows of, only varying the manner of applying; for they roll the Arm (for instance) all over with Plasters, and lay not a patch only on a place.

Th. Bartholin. Cent. 4. Hist. 9.

X. *Aristotle* 1. *Self. Probl.* 46. will have Cataplasms to be changed at certain intervals, though they have lost nothing of their vertue, because Nature is not affected by any Remedy she is accusom'd to for some while. What he says of Cataplasms, may be understood of every local, and indeed of every Medicine; because they all act on the account of their being contrary: when therefore they become like through custom, they can act no longer, because no Passion is made by what one is accusom'd to. Hence those erre who in laying on Cerecloths say, that they are to be kept so long upon the Part as till they fall off of their own accord. Besides they are of a contrary opinion to *Galen* and *Avicen*, who unanimously say that neither internal nor external Medicines are to be rendred customary to Nature.

XI. 'Tis a great error when malaclick Plasters are made of *Galbanum*, *Ammoniacum*, *Opopanax*, *Rosin* and the like, and are diluted with much Vinegar; for so they attenuate, incide, discuss and not mollifie.

Hollerius.

XII. The use of Fomentations is sufficiently famous amongst Topicks, which are made of some Liquor or Decoction of many Simples, which several include in a Bladder: but the same are made unprofitable by that means; for the vertue of the Simples passes not through the Bladder into the Body, but the heat only operates: whence if some part be only to be heated, such Fomentation does good, let the Liquor that is included be what it will; as also for easing Pain and digesting Humours: But if obstructions be to be dissolved, or something be to be mollified, 'tis better to use either linen or wollen cloths.

Primros. de vulg. err. l. 4. c. 46.

XIII. Anointings that are very oily do obstruēt and stuff the Pores, unless a little spirit of Wine be added; or before the anointing rub the Part with a Squill newly cut through the middle, to make the Medicines penetrate the better.

Fortis.

XIV. A Person falling out of his Chariot, divers Accidents superven'd, such as use to befall Persons bruised, and amongst them the motion of his Arm was much impaired. For fear he should quite lose the use of it, his Spine is anointed with strong Ointments, and hot Plasters are also applied, upon which he fell into a Fever; from which yet he is soon freed by leaving off those Topicks: He said he perceived the heat very sensibly to proceed from the Medicines (namely in the great Vessels that run that way.) After some Weeks they fall again to Topicks, and the Fever returns again: whence 'twas thought fit to abstain from those stronger and to use an appropriate Water, by which he was cured.

Phil. Sal. math. Cent. 1. Obs. 79.

XV. This is to be esteemed for a most certain Proposition, That never any Powder is to be sprinkled upon any Part, unless it be first anointed or wet with some clammy Liquor, that the Powder may be made to stick on, except in the Head, where the Hairs sufficiently retain the Powder that is sprinkled amongst them. Thus for Bruises of the Limbs we use astringent Powders in the beginning to hinder a Fluxion, and those not only in the bruised

bruised Part, but in the neighbouring Parts also; but first of all we anoint the Part with some astringent Oil, as the Oil of Roses, Myrtles, Quinces, &c. Pouders may also be kept on, if the white of an Egg strongly beaten be smeared over the Part.

XVI. The use of the cutaneous Veins comes all to this, that what Blood remains over and above the nutrition of the skin and subjacent Parts, may be carried back by them to the larger branches and trunk of the *Cava*. Hereby the virtue of Topicks applied to the Wrists, transmitting their Particles and Atoms through the Pores of the skin, may be communicated to the Blood, yea to the Heart it self. Some Veins have that great virtue and power, that they can communicate to the Heart the deadly poison of things laid to the skin by stealth though never so slightly: This poison is carried to the Heart by the Veins which carry back the Blood to the Heart. ¶ Those Physicians are not to be heeded, as being more subtil than skilful, who reject the use of all Ointments, Plasters and Liniments, because it does not seem probable to them that fat and oily things can penetrate through the Skin, Fat, Membranes and Muscles of the *Abdomen* that encompass the contents: But though this seem improbable, or at least difficult, yet daily experience witnesseth that internal Diseases of the *Abdomen* (or Belly) are daily cured only by the use of Ointments and Liniments. Now though the laudable effect of Oils and oleous things may suffice to prove their penetration through the skin and other parts; yet the ways also may be determin'd by which oily things may penetrate even to the inner Parts of the Belly, namely the Pores of the skin, from which there is a passage to the Vessels, and consequently to the Heart. For seeing all the Parts of the Body are made up of various Particles, like natural *Minima*, and therefore of Atoms joyned and wrought together; it is not probable, seeing they are diversly shaped, that they are so exactly fitted to one another, but that there is every where a passage through them for fluid Bodies, and especially for such as are volatil: which *Hippocrates* also observed when he pronounced the whole Body to be pervious, and any one may observe that views either the Bones, Gristles or other Parts, and notes them to be porous, especially when he considers the same with magnifying glasses, and compares them with things made by Art, linen or wollen Cloths, which though never so close, yet are pervious withal; for he will acknowledge and conclude that there are every where Pores, sometimes larger, sometimes straiter, in all natural things.

XVII. Many are often deceived in outward Alteratives, as Ointments, Plasters, Cataplasms, &c. whilst they let them lie longer than they should upon the parts affected, and see not that custom makes Topicks like to the heat of the parts, and when they are made like, have no further power to alter: And the reason is most manifest, because all Alteratives alter only so long as they are unlike. Hence *Galen* 3. *de temp.* says that when Lettuce is assimilated it does not cool. *Aristotle* (1. *Señ. Probl.* 46.) being to shew why custom takes away the virtue of Alteratives, asks why Cataplasms ought to be changed? To which he answers: As those things which we commit to the Stomach, if they be Medicines, in tract of time are no longer Medicines but Aliments; in like manner Cataplasms that one has been long us'd to, do not do their office. What the Philosopher says of a Cataplasm, is to be understood of all Alteratives inward and outward.

XVIII. Let Refrigeraters be moderate, endued with that faculty rather in power than in act: for things that are actually cold do condense the Pores, incrassate the Humours, and fix the Blood in the

inflamed part. *Rhazes* used the clarified juice of Endive, which we also may give to four Ounces in a Decoction of Mallows, Violets, and Barley.

XIX. Though Oils made by infusion may seem by their unctuousness to obstruct the Pores of the Skin when they are smeared upon it; yet fomentations may remedy this; which are to be used before the anointing, as also such things as may help the penetration of the Oils.

XX. Ointments cool less, to wit comparatively; or they are oftener prescribed with an intention to heat than to cool; and therefore by consequence we must not equally and in every regard rely upon refrigerating ones, as for instance on the refrigerating Ointment of *Galen*, *Mesue's* Ointment of Roses, because of their oiliness.

XXI. The same do not astringe much, from that general induction that all oily and fat things relax, whence they are improperly called Astringents. Hence also, except *Unguentum Comitisse*, which being anointed on the Loins, is commended for nocturnal pollution; or on the *Pubes*, for too great a flux of the Terms; there are few astringent Ointments to be had in the Shops: And those which are administered with that intention, do profit more by their strengthening Aromatick virtue in the *Dysenterie*, fear of miscarriage, vomit, or *cholera*, than by any thing else.

XXII. Where we would avoid laxity, they are not convenient: Hence what we have said already of Stomachicks, holds also of the Joints, namely in the Gouty, that unguentous things hinder transpiration, cause a greater afflux, and are apt to fix the Humours in the parts affected, so that 'tis more adviseable to let them alone. Yea even in Diseases of the Lungs, though they loosen the matter that sticks in the Pipes, yet they are apt to cause a greater afflux therein, whence in that case Resolvents are better, as *unguentum rubrum potabile*. Whence when any of the viscera are too much bound up, they may be used; but not when the viscera are too lax, for they do but increase their laxity.

XXIII. The same are not good in a Cancer, because by Emollients that acido-saline acrimony is more provoked and spread: whence Tumours that are not cancerous, become such by the use hereof. They are bad for the Hemorrhoids, (See Book 8.) for Inflammations (See Book 9.) whence they are not to be used indifferently for the Quinsie, as is prescribed in Books of Practice; for loose Ulcers, as of the Lips, for instance, because they are apt to promote foulness. Yet note that this is chiefly to be understood, 1. of purely fat oily things, especially the vulgar Ointments; 2. When they are let alone and not changed; for otherwise 'tis very well known that *unguentum de lithargyro* is much commended for Burns and other things. In a word, whatsoever Distempers are hurt by fat things, are hurt also by Ointments.

XXIV. Note that what Parts soever are more hurt by cold things, as the Stomach, Liver, Spleen, the same generally do require hot Epithems: and on the contrary. In particular there are some who always bid us apply to the Head things only that are somewhat warm; but Experience testifieth the contrary, whereby 'tis frequently observed that cold things are continually applied to the Head.

XXV. Whatsoever Diseases, or Parts affected, are hurt, increased, or exasperated by actual moisture, Epithems are not so proper for them: whence they are not good in Burns, for in that case Demulcents, in the form of a Liniment, are more advantageously prescribed than pure water: Nor in an Erysipelas and other Inflammations; for though some apply therein linen rags wet in cold water and wrung, by way of fomentation, yet that is not so safe, for

Fortis cod.
fult. 86.
Cent. 2;

Wedel de 7
Med. comp.
ext. p. 184;

Idem.

Idem.

Idem.

Idem.

feac

Rondel.
P. m. 977.

Rosine, dis-
sert. Anat.
P. 1034.

Sylv. de le
Boe Prax.
1. 3. c. 3.
§. 105.

Sanctor. m.
V. E. l. 4.
c. 19.

fear of repulsion, especially if the *Erysipelas* be in the Face: But in Practice it is to be observed as a Rule. In every true *Erysipelas* dry Topicks (the *Pulveres Erysipelatodes* of *Ludovicus*, *Mynsichtus*, &c.) are better than moist ones. Hence also 'tis better to let them alone in *exanthemata*, Small Pox, Measles, *Petechia*, &c. Whence also in that case we use not so commonly to apply moist things to the wrists, or bags and Epithems to the Heart, no nor to the Forehead lightly, for allaying (for instance) the symptomatic pain of the Head. On the same account they are not good in Catarrhs, *Coryza*, &c. for as Baths are bad for these, so also are Epithems, as being particular lotions, in that they move the *Serum* the more. Hence they are less profitable in the beginning, but after and with others, as if all these external things were respectively to be called in rather to the acid, or, if we will grant more, the society of internal Remedies, than to bear rule, wherein indeed men offend in both excess.

Idem.

XXVI. Emollients are not good for melancholick Tumours, which (Tumours) are endued with a saline acrimony, like Mercury sublimate: whence is that golden admonition of *Galen* *S. de simpl. m. fac. cap. 9.* That a Cancer and cancerous Tumours are exasperated by emollient Medicines. For by this means the Pores are the more dilated, whereby both an afflux of Humours is procured, and the corrosive acrimony is spread further, seeing it can neither be dissipated nor concocted, nor brought to digestion; and so mollifying is the encreaser and parent of Putrefaction. See *Wærus Obs. p. 95.*

V. Wedel.
de f. m. fac.
p. 32.

XXVII. We use not to lay Powders on the Breast, as we do on the Belly, yet after anointing with convenient Oils. For Powders sprinkled upon a part are more less effectual than when reduced into the form of a Liniment or Cerecloth, because they are prepared of odoriferous things, and the virtue of such things exhales by boiling, unless they be boiled in a double or close Vessel. Now Powders may be made more or less hot with respect to the intemperies, and the thickness of the parts of the Hypochondres; for those who are fat have those parts very thick, wherefore the Medicine must be both the stronger and the thinner, that the virtue of the Medicine may reach to the part affected: but those who are of a spare Body, need Powders that are less hot, but more astringent, because they hinder the dissipation of the Native heat.

Rondelet.
Oper. p. 973.

Vesicatories.

The Contents.

- What Humours they draw forth, and whence. I.
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- The cure of a Gangrene following upon a Blister. VIII.
- How the Pain left by a Vesicatory may be eased. IX.
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- A Vesicatory by Cupping-glasses. XII.
- The great profitableness of Vesicatories. XIII.
- The efficacy of Vesicatories applied to all the fore-part of the Head being shaved, in sleepy Diseases, the Cataplexie, &c. XIV.

I. THE Humours that are evacuated immediately by a Vesicatory, issue partly out of the

Pores and Glandules of the Skin, partly out of the mouths of the Arteries, and partly out of the ends of the nervous Fibres: perhaps out of the mouths of the Veins a little of that juice that is newly received into them, but it does not seem that much can be sent back again. 1. The Skin, which consists of a double coat, very porous, and is likewise thick beset with very numerous Glands with fat, also with the ends of the Vessels and Fibres that terminate in it and are variously woven with one another: wherefore when the cuticle is taken off by a Vesicatory, and the true Skin lies bare, the nervous Fibres being twitched do constringe and wring the Glandules and Pores, so that the serous Humour contained in them both is plentifully squeezed forth. Moreover seeing the Pores open one into another, the serum flows not only out of the blistered Part, but sometimes a portion of the Serum coming from the neighbouring Parts succeeds in the Pores that were first emptied, and then by and by issues forth. Wherefore in the Dropsie called *Anasarca* Blisters raised by a Vesicatory drain the water from all about in great plenty, and draw it forth from all the neighbourhood, yea sometimes from afar. 2. The mouths of the Arteries about the blistered Part being uncovered and twitched, do not only spue out that portion of Serum that is accustomedly brought to them; but the serous Humour being through the whole mass of Blood imbued with the Stimuli of the Medicine, is thenceforward separated more plentifully from the Blood, and every time it circulates with the Blood, a greater quantity of it is cast off by the same mouth of the Arteries being continually irritated. Moreover together with the serum sent thus from the whole mass of Blood to the Blisters, other Recrements, and sometimes the morbid matter itself, do plentifully separate therefrom also, and are sent off through the same Emissaries: and this is the reason why in malignant Fevers, yea in all putrid ones that have difficult Crises, when the Recrements and Corruptions of the Blood being unfit for excretion, threaten the Heart or Brain, Vesicatories which continually and by degrees drain them forth, do often notably relieve: To which add, that the same do moreover alter and restore the Blood degenerated or depraved as to its Salts, yea by opening or subtilizing its compages dispose it to an eucrasie. Wherefore this kind of Remedy is often very profitable not only in a febrile state of the Blood, but also when it is otherwise vitious or cacochemical. 3. That Vesicatories do evacuate a certain Humour out of the Nerves and nervous fibres, and therefore profit in Spasmodick or Convulsive Maladies, is witnessed both by Reason and Experience. For I have shewn in another place that the liquor that waters the Brain and *genus nervosum*, does sometimes abound with heterogeneous Particles: Moreover it appears by frequent and familiar Observation, that the impurities and recrements of that liquor, together with a watry latex, do sometimes of their own accord upon the arising of a flux sweat out of the Nerves and nervous Fibres, and either restagnating into the mass of Blood, are carried off by Urine or Sweat, or being deposited into the Cavities of the viscera are sent forth by Vomit or Stool. Wherefore when by the application of a Vesicatory the extremities of the Nerves and nervous Fibres are any where laid bare, and are greatly irritated, presently the Humour that flows in their extremities is spued out, yea and therefore the whole latex though seated a great way off in their Ducts, is both freed from its stagnation, and withal the heterogeneous Particles, mixt with that nervous latex, being every where agitated and derived from the Brain, do by degrees glide towards the newly open'd Emissary, and at length are sent out.

willit.

II. From what has been said we may gather for the curing of what Diseases this kind of Remedy is chiefly

chiefly profitable: for through the evacuation that it makes out of the *Pores and Glandules of the Skin*, as often as a serous, salt, acrimonious or otherwise mischievous Humour is collected in these Parts or in their neighbourhood, and being excluded from the circulation of the Blood sticks pertinaciously there, there is certainly no readier or easier way of draining it forth than by applying a Vesicatory above or below the Part affected. Wherefore a Vesicatory is not only indicated by an *Anasarca*, and by all *defilements* or eruptions of the *Skin* whatsoever; but moreover is required in *Pains* whether *arthritical* or *scorbatic* fixed any where in the outer habit of the Body or in any member. 2. In respect of the *Blood*, which wants both to be leisurely cleared from any heterogeneous and morbid matter, and also to be altered from its too acid, or salt, or otherwise vitiated condition into a right temper, Vesicatories are always made use of in malignant Fevers; yea they are of excellent use in all putrid malignant Fevers and which are of a difficult Crisis: Therefore likewise in the *Scurvy*, *Leucophlegmatia*, *Green-sickness*, and also in every other *Cachymie* is this kind of Remedy very profitable. Moreover Vesicatories are applied with good effect not only for amending of the Blood itself; but also as often as it being depraved does impart its corruptions to other Parts, and so is the first cause of Diseases in the Head, Breast, Belly or Members, and raises their Paroxysms. Wherefore in *Head aches*, *Vertigo* or *sleepy Distempers* this is a common and vulgar Remedy; and no less in a *Catarrh*, and any *desfluxion* whether into the *Eyes*, *Nose*, *Palate* or *Lungs*; does every one, even of the vulgar, without advising with a Physician, prescribe *Cantharides* for himself as a revulsory Remedy. I confess that many times when I have been taken with a *cruel Cough*, with a great deal of thick *Phlegm* (to which I am originally subject) I have been helped by nothing more than by Vesicatories; and therefore I am wont, while the Disease is strong upon me, first to apply Blisters upon the *vertebrae* of the Neck, when those are healed up, then behind the Ears; and afterwards, if it shall seem needful upon the *Shoulder-blades*; for so the *serous illuaries*, issuing out of the too much loosened *compages* of the Blood, is derived from the Lungs; and moreover the mixture of the Blood, in regard its irregular Salts are destroyed by this means, does sooner recover its Crisis. 3. In respect of the *Humour* which is to be evacuated or derived out of the *genus nervosum* and the Brain itself, *Epispasticks*, as they are of very common use, so they are often wont to give the greatest relief in *sleepy*, *Convulsive* and *painful Diseases*. Was ever any taken with a *Lethargy*, *Apoplexy* or *Epilepsy*, but presently those about him claw'd his Skin off with *Cantharides*? I have successfully applied large Vesicatories in several Parts of the Body at once in strange *Convulsive motions*, and now and then changing their places have continued repeating of them above a Month. Moreover Pains fixt in the *membranous Parts* and cruelly tormenting are seldom cured without this administration: For sometimes the Humours and morbid Particles, which being deeply rooted yield not at all to Medicines working by Stool, Sweat, or Urine, seem to be pulled up by the roots by Vesicatories, which lay hold on the Disease with hands as it were.

III. Yet this Remedy, though very general, uses not to operate so easily and happily in some Diseases and Constitutions: For those who are subject to the Stone and to a frequent and grievous Strangury, scarce ever have them applied without prejudice; and therefore for the avoiding of a greater mischief let none that are so affected, use Vesicatories save in malignant Fevers, or acute Cephalick Pains. As to the various Temperaments and Constitutions of men, in respect whereof Vesicatories are more or less convenient or profitable, there

occurs this threefold remarkable difference hereupon. First, Some do almost always endure well the use of this Remedy, and the Blisters that are raised thereby in the Skin do pour forth an ichor plentiful enough without a dysurie or any great inflammation of the Blistered place, and then they heal up of their own accord: which effect succeeds only in a well temper'd Blood, namely where together with a moderate and rightly constituted salt and sulphur there is a sufficient quantity of Serum, whose *latex* departing easily and pretty plentifully from the rest of the Blood carries along with it the more acrimonious Particles of the Medicine which it has imbibed, and partly pours them forth by the blister'd place, and partly conveys them forth by the passages of Urine, without injuring them; and by this means are the aforesaid profitable effects produced in the mass of Blood. But secondly, this Medicine neither agrees nor works well with others, because it makes the Part to which it is applied look very red, or rather fleys it with cruel Pain and great Inflammation; and yet the Blisters that are raised there, though they torment the Patient awhile, yet pour they forth but very little or hardly any ichor; and besides, these to whom the blistering is so painful, are moreover cruelly tormented with a Strangury. This troublesome and also fruitless use of a Vesicatory happens often to Persons of an hot and choleric temper, whose Blood namely is endued with a plentiful Salt and Sulphur, with a moderate quantity of serum thoroughly soaked into one or other of them. Wherefore seeing its *latex*, which ought to carry away the acrimonious Particles of the Medicine, does neither easily nor plentifully (that it may presently wash them out) depart from the rest of the Blood, those Particles sticking still in the Skin, infect and as it were Poison the Blood itself that passes that way, and hindring it from its circulation cause it to be collected and to stagnate about the extremities of the Vessels (whence they are inflamed.) Moreover the serous *latex* being separated at length by the Kidneys, being little and acrimonious of itself, and moreover tinged with Particles from the Medicine, irritates the neck of the Bladder, and often corrodes it by its acrimony. Thirdly, The third case of Vesicatories (though more rare) is when the Blisters that are raised in the Skin, do forthwith pour out so vast a quantity of the serous Humour, that presently 'tis necessary to use with diligence Medicines that repell, and shut the mouths of the Vessels, or otherwise there is danger lest a dissolution of strength and failure of the Spirits should follow: I have known this to happen so constantly in some, that afterwards they were forced to abstain from the use of *Cantharides*, whatsoever need there was of them. The reason whereof seems to be, that the Blood being endued with too much salt and acrimonious serum, had a *compages* too apt to dissolve; wherefore the serous *latex* being too acrimonious and impetuous of itself, as soon as it is incited by the Particles of the Medicine which loosen the too easily dissolvable *compages* of the Blood, presently breaking forth impetuously out of the mass of Blood it issues out in a full stream as it were through the mouths of the Vessels gaping into the blistered Part.

IV. Besides this too great efflux of the serum, raised from the first application of a Vesicatory, the same happening sometimes late in malignant Fevers, and in others that have a bad or no Crisis, and continuing for some while, wholly consumes the morbid matter, and often delivers the Patient from the very jaws of Death. In such a case after that the Blisters have on the first days poured forth little or no ichor, Nature at length attempting a Crisis this way, there runs abundance of serous matter out of the same; and so it continues to

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run for many days, yea sometimes weeks, till the Patient that was before esteemed deplorable, recovers his health intirely. The Blisters running thus plentifully, as it is not easie, so neither is it safe to close them, before the whole *minera* of the Disease be consumed. One recovering very difficultly from a malignant Fever, having in divers Parts of his Body blistered places which daily discharged a great deal of ichor, after a while applied strong repercussives to them all, and so presently stopt their running. But scarce had they been stopt two days, but relapsing he was presently seized with a languor and frequent failing of his Spirits, with a cold Sweat and a small and weak Pulse: and being not relievable by any Medicines (*viz.* Cordials) died within three days, the reason whereof seems to be, that the malignant matter being suddenly driven back, had fallen upon the Cardiac Nerves, whose action being thereby hindered, the Vital function soon failed.

Idem.

Capivac.
Pract. l. 3.
c. 19.Th. Bartholin.
cent. 4.
Epist. 54.

V. When we apply *Cantharides* outwardly to raise Blisters, we only use the belly, rejecting the wings and feet, for these hinder the belly from operating so strongly as it would; nor is there any danger that the external Parts of the Body should be hurt by applying only the belly. But if we give them inwardly to provoke Urine, we give the belly indeed; but lest this should do harm, we mix with it the wings and feet, which Parts hinder the belly from hurting so much. ¶ When the Skin is to be ulcerated with blisters, the extreme parts of the *Cantharides* are to be cast away, wherein there lies hid a more benign quality.

VI. Let young Physicians beware, that in prescribing Remedies that have *Cantharides* in them, they offend not in the quantity, nor always follow the prescriptions of others: for they commonly commit an error in the Dose, when for a few Ounces of Leaven and the other Simples which the Vesicatory is made up of, they prescribe some Drachms, yea sometimes an Ounce and an half of the Powder of *Cantharides*; and because *Cantharides* are so light that fifty hardly weigh a Drachm, 'tis easie to mistake in the weight. For this reason I commonly prescribe Vesicatories thus: Take of sower Leaven half an Ounce, of *Cantharides* finely powder'd to the number of Six, mix them in a Mortar, adding a little Betony water to make it up into a Cataplasim.

VII. One having a swelling in his Knee from a tough and cold matter, a Barber applies to it a Cataplasim of Leaven and *Cantharides*, and blisters all the Knee: Hereupon amongst other Symptoms followed so great an heat of Urine, that he could not make a drop without torment and crying out (now his Urine came forth by drops and bloody.) The Cataplasim being taken off, the heat of Urine and other Symptoms remitted a little. In inveterate Diseases, as the *Sciatica*, it may be thus prepared. Take of sower Leaven three Ounces, of the Powder of *Euphorbium* a Scruple, of long Pepper and *Pyrethrum* (or bastard Pellitory) of each two Scruples, of *Cantharides* to the number of Sixty, mix them, and make a Cataplasim with *aqua vite* as much as suffices. If *Cantharides* be applied on this manner, they are void of all danger, even though they be laid on Parts that are nearer to the Bladder.

Fabr. Hild.
obf. 98.
cent. 6.Joh. Rhod.
cent. 3.
obf. 88.

VIII. A young Man of two and twenty being inclinable to melancholy, is taken with a malignant Fever: Four Vesicatories are laid on his Hips and Thighs, which by attracting poisonous Humours caused a deadly Gangrene in his Thighs within two days. ¶ The blistering Plaster of the Shops was prescribed to a Girl two years and an half old, ill of a malignant Fever; to increase the vertue whereof the Apothecary sprinkled a good quantity of the Powder of *Cantharides* upon it, by

which the Skin was burnt up, and the next day all the Part was gangren'd. For the cure whereof, having first us'd Scarifications, the Part was fomented with *aqua vite*, and then a Liniment was applied of *ungu. Egyptiacum* dissolved in *aqua vite*: Within three dayes the Eschar was separated, and the Ulcer that remained was cured by the following Ointment: Take of the fat of a Bullocks Kidney one Ounce, of Litharge prepared and red Lead of each a Scruple, of the Oil of Roses as much as suffices to make an Ointment.

River. cent. 2.
obf. 86.

IX. One complained to me of a Pain raised by a Vesicatory, but I could ease him with no Anodyne; Dr. N. asswaged the Pain with only Water and Oil. I eased a poor Woman tortured with the fire of a Vesicatory, thus: Take of the inner and green bark of a branch of Elder scrap'd off with a knife, an handful; boil it in sweet Oil with a little water to the consumption of the water: strain it, and add to the liquor a little wax, and it is an excellent Ointment.

P. Pa. hequid
ad River.
obf. com. 12.

X. Though Vesicatories and Sinapisms heat the external Part to which they are applied, yet that heat penetrates not to the internal Parts: which those have not understood who have thought that Vesicatories are not to be used in malignant Fevers with raving. Galen himself (2. de diff. feb. tit. ult.) says, That the next Parts to which Sinapisms are applied, are heated indeed, but not the remote, contrary to those who say that Vesicatories heat the inner viscera.

Sanctor. lib.
de rem. inv.
c. 16.

XI. Whether is it good to add Vinegar to Vesicatories, as is commonly done? It makes for the negative, that Vinegar fixes the saline acrimonious Parts and infringes the acrimony, as we use Mustard for sawce that has first been steeped in Vinegar, which without so doing would be too biting: Onions, Garlick, Rhadish, Aron are made mild by Vinegar. From whence Martian (*Comin Hippoc. p. 282.*) concludes, not without reason, in the negative. Add that Vinegar does repell and cool, which is contrary to the indication, especially when there is malignity withal. The matter may be easily decided, if we have regard both to the moderate quantity of Vinegar, and the form in which it is administred: for thus by its acrimony it increases the vertue of the Vesicatory, and the body of the *Cantharides* being dispersed through the Leaven, it cannot so infringe their vertue, but that it yields to the force of its corrective; so that in this form a little Vinegar, though it partly mitigate the force of the Medicine, yet it does no harm. But those Vesicatories are the best of all, when the *Cantharides* are made up into a Paste with Wax and Turpentine, and used Plasterwise; or we may use *Horstius's* blistering Plaster.

Wedel. de
f. m. fac. p. 99.

XII. I raise Blisters with Cupping-glasses only; which invention of mine I here communicate. I take a Cupping glass with a wide mouth, and firing it with tow, as the manner is, I set it on where I have a mind: when it has stuck on for a quarter of an hour, I take it off, and set on a new one with as much flame as I can: a little after in the younger and more fleshy (more slowly in old men, or such as have a thick Skin) there arise Blisters, hardly so big as little pins heads; all which within an hour leaping into one, there arises a Blister as large as the mouth of the Cupping glass. Then if the Cupping-glass have not an hole stopt with wax, (which being perforated with a Needle the wind issues out and the Glass falls off of its own accord) I use to hit it with a knife and break it; otherwise if you endeavour to pull it off with your hand, it tears the Blister and causes great pain. A great quantity of water being always drained out this way, I tie upon it a Colewort-leaf or the lean flesh of an Oxe's muscle, so long till by its sinking it shew that it ought to be taken off. Blisters are raised this way most certainly within the

H. 3b Heers
Obf. 21.

the space of an hour, and that without any prejudice; whereas all other Vescatories do often fail us after many hours waiting, and either prolong the Disease, or make it stubborn, or even unconquerable.

XIII. He that shall administer Vescatories rightly, shall generally obtain the victory over the most difficult Diseases; especially over those that are fed by a flux of Humours, and chiefly if the Humours be ferous and acrimonious (the Greeks call them Ichors) because these flow the most conveniently through the opened pores of the Skin. Wherefore if there be a rebellious and stubborn Disease either in the Eyes, or Nose, or adjoining Parts, amongst all other Remedies which provident Physicians have been wont to make use of, I have scarce found any better than this. So if there be bad eruptions of some eroding Humour in the papes, Stones, Cod, or Yard, which it would be dangerous to permit to settle there, an efflux may conveniently be given to that Humour by applying Vescatories upon the Hips, as being more vile Parts and more able to endure any thing. Moreover if the Neck, or Breasts, or Navel, or Belly, or any other parts labour under any bad Ulcer, or Swelling that threatens an Ulcer, we must endeavour to avert the danger by applying Vescatories upon or as near them as we can where the part is most fleshy. And that I may give thee one rule that is most general, all loose and weak parts, that are of greater dignity, which there is fear may be seized upon by some fearful Malady, will be relieved by this sort of Remedy, as experience testifies. Besides if some Seeds of the Pestilence do infect some parts of the Body, especially the more noble, 'tis reasonable to hope they may be defended this way. In general, they attract and revell, by inducing a pain upon the part, both while the pain is in exciting, and afterwards, and cause an actual evacuation of the Humour that flows into the defended part. For a Vescatorie is not only a Revulsory Medicine, but an excellent Evacuatory; so that when there remains some old painful Tumour after the Body is evacuated, and the Physician has prescribed other Remedies in vain, this Remedy should be tried at last, as being wont sometimes to relieve wonderfully. I remember a young Man being so pained in his Knee from the French POX, that his Leg was drawn up and he could not go, having made use of this Remedy was forthwith freed both from the pain and contraction.

Severin.
Chir. Trim.
P. 55.

XIV. About twenty years ago I was sent for to a Patient two Leagues from Mafcon: It was the Baron of Pierreclos, who lost all his senses of a sudden as he was about to make Confession and receive the Sacrament. I met with Five Physicians there, my self making the Sixth. We entred upon consultation, and from what they proposed I could gather, that they had omitted no kind of Remedy that might conquer the Disease, and relieve the Brain from its blockade: They were the more earnest and intent upon the cure, out of an opinion, that he could not be received to bliss unless provision had been made for his Soul by the aforesaid Confession and Sacrament. When it came to my turn to speak, observing that the Remedies commonly made use of had been administered in vain, I offer'd this, namely to shave his Head and apply a Vescatory Cataplasma all over it; hoping that by the efficacy of this Topical Remedy the ferous Humours, that in my opinion overflow'd the whole substance of the Brain, might be drawn outward, and so the Brain might either be freed therefrom, or however less burthen'd with them. The case seeming desperate, the rest gave their consent; and there was a Vescatory applied, which had the hoped for event: for by vertue of this Remedy the Patient recovered his Speech, Judgment, Memory, Hearing, and all his other Senses, except his

Sight. The kindred and Friends of the Patient rejoycing, and magnifying my skill, and admiring me as a Miracle-worker, the Priest received his Confession, and gave him the Eucharist: He also made his Will; but after a while, as I foretold; he fell into his former drouiness, and the next day slept quietly away. This Story was communicated to me by Carolus Sponius, a Physician of Lyons.

Vomitories.

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I. Vomiting is very profitable for those who have bad habits of Body, when it is easie and moderate, and it is the most excellent of all Purgations; for it drains the noxious Humours, sincere and without mixture, out of their very fountains, and evacuates all that filthiness which sticks in the cavity of the Stomach or its Coats. It purges chiefly out of the Membranes of the *præcordia*, out of the hollow part of the Liver and Spleen, and drains superfluous Humours of all sorts out of the *Pancreas*, which otherwise neither *hiera*, nor any other though the most vehement Medicine could hurry into the Guts: For the passages from these parts into the Stomach are short and ready, and more direct than into the Guts, so that the Humours pass readily through them by Vomit. Now though it drains out of the inner parts, yet it relieves the Head and the rest of the Body by consequence. Wherefore it is profitable in all those Diseases that have taken their rise from the impurity of the *præcordia*, for a weak appetite, often vomiting, loathing of meat, puffing up of the Stomach and *præcordia*, Jaundise and Cachexie, Agues, Megrim, Vertigo, Falling-Sickness, and all Diseases of the Head that are contracted by a Sympathy with the *præcordia*, and which the impurity spread from the *præcordia* into the rest of the Body hath produced.

Fernel. m. m.
l. 3. c. 3.

II. Though Vomits be of notable efficacy, yet they ought not to be taken by all without distinction: For in some the tone of the Stomach is too loose and weak, and their constitution so tender, that they make the Spirits presently to quail, and dissolve the strength. Some Mens *viscera* also are too pertinaciously sensible, and though they be hard to Vomit, yet when they have once begun, they do not easily give over, but by a frequent straining to Vomit, their strength is very much dejected, and they oft fall into a swoon.

Willis
Pharm. rat.
p. m. 57.

III. I think that opinion to be untrue and to lean on very trifling foundations, which determines that some Vomitories act upon choler, others upon phlegm, and others upon Melancholy, and drain forth this or that Humour separated from the rest, and alone as it were. And the reason why a vicious and as it were phlegmatick matter is sometimes chiefly expelled, is, because the filth of the Stomach alone almost is thrown up, the receptacles of the choler being not shaken by the straining: But when the choler Vessels are milked out, the excretion becomes choleric for the greatest part. The vomiting of a black Humour for the most part depends on the tincture of the Medicine; for it is that which colours the matter which is cast forth, with a vitriolick blackness.

Willis
ibid. p. 55.

Sylvius de le Boë (m. l. 2. c. 10.) is of a contrary opinion, appealing to experience. I observe, says he, that some Vomitories do chiefly expell phlegm, others choler, and others any Humours indifferently, which though it have been observed by few, yet ought it to have been observed: Thus 1. Peach flowers do expell bilious and serous Humours even by vomit. 2. *Asarum* also evacuates choler upwards. 3. Turbith casts glutinous phlegm up by Vomit. 4. The seed of *Carthamus* brings up both phlegm and water. 5. *Elaeterium* purges water and choler both upward and downward. 6. The Root, Bark, green tops and flowers of both *Dwarfelder* and *Elder* bring up water by Vomit. 7. Gummi Gotic water and choler. Add to these the root of *Zalap* which expells water by vomit as well as by stool.

IV. As to the choice of Emeticks, the chief reason of their difference is, that the milder be given in some Diseases, such as may disturb nothing beyond the Stomach, and may gently bring forth those

things only that float in its cavity or stick to its coats: but in other Diseases the stronger are more convenient, that the convulsion being imparted also to other *viscera*, whatsoever excrementitious thing stagnates therein, or is collected any where, may be moved out of its lurking place. Now this evacuation as it is more violent than that by stool, so if the strength bear it well, it uses in some Diseases to profit more at once than ten Purges: for by this means the weighty phlegm that sticks close to the folds of the Stomach, which all Purgers would slide by, is swept out with a Broom as it were. Moreover the neighbouring parts, the *Pancreas*, Mesentery, Spleen and Liver it self are strongly shaken, so that the obstructions bred therein, as also whatsoever stagnations of the Blood and Humours, are easily removed by this kind of Remedy: the preternatural ferments bred any where in the Body, and the more recondite Seeds of Diseases, are seldom extirpated without Vomitories; but the use of Emeticks is found chiefly profitable in the Diseases of the Brain and *genus nervosum*. For by this sort of Remedy not only is the filth of the Stomach and Bowels, which defiles the chyle and Blood, cleansed away in great plenty; but also the glandules of the *viscera*, which are the Emetories of the Blood and nervous juice, are milked, the choler-vessels and other receptacles of the excrements are plentifully evacuated; so that the same being emptied do the more readily receive the Serum and other filthinesses and superfluities of both Humours, that otherwise would be apt to overflow into the Head. Besides all this, seeing there are innumerable little mouths of Arteries gaping under the downy crust into the Stomach, these being notably twitched by the Emetick, do pour forth all sorts of vitious and malignant Humours in the Blood, to be evacuated by Vomit: and for this reason chiefly is it that Herculean or stubborn Diseases are well cured by Emeticks, and hardly at all without them: for these Medicines being of an active and untameable Nature, do not only by twitching the Arteries squeeze the superfluous Humours out of the mass of Blood, but also by entering into the Veins, innumerable whereof gape into the Stomach, do fuse the Blood, and do precipitate and cause to be separated its serosities and other recrements.

Willis pharm.
mac. rat. p.
55.

V. Custom and facility seem to me to be of the greatest moment in raising a Vomit: for if these be wanting, 'tis of far greater difficulty to be purged by vomit, than by stool; though not of less profit, yea of far greater, though purging by stool be safer. Hence it comes to pass, that prudent Physicians, and such as take most care to cure safely, are commonly content with purging by stool: but Mountebanks, who slighting the dangers of the sick, would for Honour and Glories sake do some great thing by hap hazard, undertake the most violent vomitings: as for my self, though I would never design to purge by stool and vomit much at once, because that is an accident of a very bad Disease, namely the *cholera morbus*; yet I do not dislike that temperate purgations of both kinds, namely, both vomiting and dejection, should ensue upon the taking of a Medicine, nay I hope well therefrom, both thick and thin Humours being evacuated and purged as well upwards as downwards.

Vallef. m. m.
l. 2. c. 5.

VI. Yea sometimes Vomitories may be joined with Sudorifics, for there is no harm in their being taken and operating together, seeing the motions by vomit and sweat are not contrary to one another, but only diverse. For the pipe or chanel of the Guts, together with the Stomach and Gullet, are unskilfully and unjustly esteemed the centre of mans Body, and the pores of the Skin its circumference: For if any part might be said to be its centre, there is the greatest reason the Heart should be so esteemed, from which the Blood is carried into all the

the parts; as likewise the several parts for its circumference, seeing the Blood is carried back from them to the Heart, and that according to the circular motion of the Blood. Now if the Heart be determin'd to be the centre of mans Body, then the pipe of the Guts, through which the Gall-bladder and Pancreas discharge themselves, and the mouth it self, into which and by which the Salival glands unload themselves, and sometimes the Stomach it self with the small Guts, are no less to be esteem'd for its circumference, than the external Skin, through which the sweat is expelled, and the Piss-Bladder, by which the Urine is evacuated. Reason does not only argue this to be probable and likely, but experience proves it to be true, which hath more than once assured others as well as my self, from the excellent success and great benefit of the Patients, that Humours offending in the Body are expelled at the same time and by the same Medicine, both by vomit, stool, sweat and Urine. Which experience hath taught to be profitable in not a few distempers, such experience, I mean, as is certain and consenting to solid and sound reason: And that the same may be safely and with good success done in the Plague, I make no doubt. See Book 6. under the Title of a Pestilential Fever.

Sylv. Append. Tract. 3. §. 594.

VII. Let any should think that Cholera only does affect to pass upwards by Vomit, daily experience teacheth us, that both inspid and salt and acid water, as well thin as thick, yea tough phlegm is vomited up by many of their own accord in abundance: which where it is observed to be done, if nothing gain say, 'tis convenient to follow the said guidance of Nature, that is, to promote the motion of the Humours that is spontaneously made upwards. Now I reckon that the Humours are moved upwards spontaneously, that is by Nature, as often as being carried through the Pancreatick and Biliarie duct into the small Gut, and meeting with the phlegm produced chiefly from the spittle that is continually swallowed, or with the aliments, Medicines or poisons that are taken in and are sliding out of the Stomach through the pylorus, they raise an effervescence as well with one another as with these, and that such as through which they are driven upwards to the Stomach, in some and that either a less or larger part, or altogether.

idem tract. 6. §. 163.

VIII. Let such Vomits as are strong, be given especially to delicate Bodies and weak Stomachs, after meal: But if you would have a plentiful evacuation in such as are more strong, give them on an empty Stomach, especially Antimonials, whose vertue is soon dulled. Prepare the more tough Humours by Incisers, Openers, Oxymel, with some Syrup made acid by the Spirit of Vitriol or Sulphur, by bathing, by long fomentation of the Hypochondres for many days; and after give a Vomit: After every Vomiting give some fat broth: In vomiting foment the Stomach with some relaxing fomentation, and afterwards with a strengthening one: At night, if there be need, let Laudanum be given; the next day, some Conserve, Tablets, or strengthening Wine.

Ex schedis Dom. Turqueti de Mayerne.

IX. The Ancients used Vomits frequently, and purging by stool but seldom: and Hippocrates for prevention never used purging by stool, but always by Vomit, as appears from 3. de dieta, and 1. de insomni. For because it cannot be so manifest what Humour abounds most whilst no Disease does as yet appear, he therefore purges by Vomit, whereby not only that Humour which is agreeable to the Medicine is brought forth, but also any other whatever which happens to abound in the Body. ¶ Because the Stomach gives to all and receives from all, therefore does Hippocrates use vomiting for prevention whilst a Disease of any part is imminent.

Prosp. Martian. com. in v. 153. l. de nat. hom. idem com. in v. 136. l. de insomni.

X. Some refuse Vomitories, because we are not so accustomed to them as the Ancients; as if in our age no Disease had its Crisis by Vomit; or there were not to be found men who vomit very easily both of their own accord and by Medicines: whence we daily observe that many sick persons, after they have been physick'd a long time in vain by rational Physicians, have been wholly cured of most stubborn Diseases by taking Antimony or the like violent Remedy given by some Empirick: nor are men in more danger by the use of these than by our Benedilla's commonly so called; which though they be gentle and easie, yet are even they observed sometimes to cause deadly superpurgations: For the harms that proceed from a Medicine, depend not altogether on its strength, but its unfit use: whence a Physician does no less harm by giving a weak Medicine to him that needs a strong one, than if he gave a strong one and perhaps one that works upwards, to him that has need of one that is gentle and works by stool. Yet I deny not that purgings upwards are far more uneasie in the very act of Vomiting than purgings downwards; so that the Patients think themselves even ready to dye: yet when the evacuation is over, the clean contrary follows; seeing those that have been purged by Vomit, are presently better, and are made more chearful and ready to perform all operations; they are not thirsty, they have a good appetite, and are very quickly recruited: the contrary whereto happens to those who have been purged by stool. Nevertheless Physicians now a dayes preferring pleasantness before all things, without any regard to the Disease, or season, or any thing, always prescribe purging by stool, to the great prejudice of art.

idem com. in v. 231. l. 3. de morb.

XI. We must take heed of purging too Acrimonious or corrupt Humours by vomit: for the sense and excellency of the mouth of the Stomach can hardly endure the contact of the vitious matter, unless it be first very well prepared, and mixt with other lenient and moist Medicines.

Mercat. de ind. med. l. 1. c. 5.

XII. Vomitories require their just and exact dose; for being given too sparingly they lose their vertue and purge by stool. It is a sign of a just dose, if yellow and green stuff be vomited up; and it is a sign of too small a dose, if only waterish and white Humours be cast up. Now those colours were not in the Humours before, but are brought upon them by the Medicines: Thus children vomit up the milk colour'd, whereas it was white before.

Walaeus

XIII. What some affirm, that a Vomit taken in never so great a dose, works no more strongly, than if it were taken only in a moderate quantity, is wholly untrue; and an experiment thereof is not to be made without danger: for if there be more particles of the Medicine, they will also imbue the more fibres, and entering deeper into them will provoke them the more grievously, so that more cruel and frequent convulsions of the Stomach must necessarily follow.

Willis phar. p. m. 54.

XIV. It is not safe to agitate the Stomach with violent vomiting Medicines: nor is it good to use ones self to them, seeing no wise man will make a piss-pot of a pot for cookery. 'Tis better to preserve this part diligently and to strengthen its tone, than to dissolve it by Vomiting; unless Nature affect that way, and there be an easiness to vomit, and the preparation of the Ancients have been used. ¶ Celsus (lib. 2. c. 13.) says that Vomiting does not always good to the sick, but always harm to the well; which is true especially in our age, wherein men are not much used to vomiting: for often vomiting is a cause why Nature uses to send naughty Humours to the Stomach: for though they advise to vomit after dinner, yet seeing that motion is violent, it always draws something. Adhereto that the concoctive faculty is

Riolan. Enchir. Anat. lib. 2. c. 232

A a a a a

rendered

rendred weaker, and the tone of the *villi* or fibres of the Stomach becomes more rare and thin. Also Nature being accustomed to this evacuation in health, when she is hurt by a Disease she is very apt to fall into it, whence the retentive faculty is vitiated: besides that it prejudices the Head, Lungs and Liver.

Rubeus in
Celsi cit. loc.

XV. Those act unskilfully, that I say not impiously, who after many Medicines have been administered, when the Patients are ready to die and their strength spent, use Vomits as the last Remedies, which suffocate the life that remains and hasten death. But you will say, Mountebanks do thus, and have good success? I answer, If you took account of the Patients with whom they have had bad success, you will find an hundred dead, for two (robust) Persons that were preserved, who escaped by the help of Fate, and not of this Medicine. The more wary Empiricks when they are called to such Patients, use to pronounce great danger of life; and therefore they warily administer *aurum potabile*, or some other recruiter of strength, till Nature resting from all perturbation recover her self a little, and then they take the opportunity of giving a gentle Vomit, which brings forth ferous Humours or the like indifferently.

Riolan En-
chir. Anat.
l. 2. c. 23.

XVI. Hippocrates 4. aph. 4. bids us Physick the upper venters rather in the Summer, and the lower in Winter. And 6. aph. 6. says, that the lean and those that Vomit easily are to be purged upwards, avoiding the Winter: Reason consents, because the Phlegmatick Humour abounding in the Winter, being naturally heavy, inclines downward, therefore it is to be purged downward, according to the aph. *Whither Nature inclines*, &c. He hath writ the contrary 3. de diata n. 3. where prescribing a Winter diet, *We must also*, sayes he, *use Vomiting thrice a Month, if the Patients be moist, but if dry, twice, after meals of several sorts of meat.* This he confirms lib. de sal. diata: 'Tis profitable to Vomit the Six Winter Months, &c. to which Celsus subscribes (lib. 1. cap. 3.) Solve these things, by saying that Hippocrates did not utter that opinion in the Aphorism simply, but by adding the particle *μᾶλλον*, rather: as though he did not deny but that in the Summer also we might purge downwards, and in the Winter upwards: Or say, If universal purgation be meant, as that which is made by *Hellebore*, common with Hippocrates, it ought in the Summer to be made upwards, and in the Winter downwards: If a particular, it ought to be made by Vomit in the Winter, and by Stool in the Summer: According to Galen's comment on the foresaid aphorism: *Therefore because Phlegm is generated in the Belly in Winter*, he advises us to evacuate it by Vomit, and to revel downwards the Choler that swims a top in Summer. And yet if you desire to purge the whole Body, you shall purge it upwards in the Summer, and downwards in the Winter, as it is written in the Aphorism: for those things which are superfluous, are cured by purgation, which must be made by those wayes whereto the Humours tend; for these are to be drawn through fit places that way they incline; but when you would hinder Humours from increasing, 'tis good to draw them back by contrary places.

Sinibald.
Antiph. l. 3.

XVII. We must Vomit the *Fat* in one manner, and the *Lean* in another: for the former, because the Humours are sluggish and unapt for motion, ought not to be Vomited but when they are fasting, and after considerable walking or other exercise; for so the Phlegm, which is naturally clammy and tough, waxing hot, is fused and made more apt for exclusion: On the contrary the lean, as not at all abounding with Humours, if they be to be Vomited, it ought to be done after Meal when we have eat several sorts of meat according to Hippocrates's precept l. de sal. diata, and 3. de diata n. 4.

Idem Anti-
ph. l. 3.

XVIII. 'Tis hurtful to use Alteratives and Purgatives before Vomiting, for by these the Guts are spoiled of their clammy Mucilage, so that the Vomit will corrode their substance and cause great griping. ¶ Alteratives indeed may be premised, but not of absolute necessity; for the Vomitories themselves may fuse the Humours by their proper vertue.

Walaeus p.
57.

Idem p. 56.

XIX. If the condition of the Patient and the Disease require both Bleeding and Vomiting, 'tis most safe that Bleeding should precede: for otherwise while the Vessels are distended with Blood, there is danger lest from the violent strainings to Vomit either the Vessels of the Lungs should be broken, or the Brain should be hurt, the Blood being poured thither with violence and extravasated, and so the Patient die Apoplectick.

Sydenham
tract. de
febr.

XX. 'Tis profitable to mix the Humours contained in the Stomach with sundry sorts of meat, both that it may the more closely embrace them on every side, and also that Nature may the more easily expel them when they are mixed with the Victuals: but the Victuals ought not to be of any kind indifferently, but salt, bitter, acrimonious, inciding, attenuating and turgent, which, as Galen 3. de usu part. advises, have a bilious nature, and execute the office of Choler, namely absterge and cleanse the Belly; for all these, besides that they conduce to expulsion, prepare the Humours themselves also to the same. But the clean contrary ought to be done in those whose Stomachs abound with crudities, for then it is sufficient to use vomiting potions without eating, which is suspected and often very hurtful in crude Stomachs.

Mercat. de
Ind. Med.
c. 5.

XXI. We must not Sleep upon Vomits, especially when the Bodies are Cholerick, lest the Choler be carried into the Brain in Sleeping: yet when the Patient has seem'd to Vomit enough, Sleep may be allowed.

Hartman. in
Crolium.

XXII. When the Patient has taken a Vomit, let him drink after it Beer or fat Broth, for so he will Vomit the easilier.

Walaeus m.
m. p. 60.

XXIII. He that rests and lies in his Bed, hardly Vomits half so much as he that stirs up and down.

Idem.

XXIV. After Vomiting give sweet Milk and white Bread, for this doth again demulce the Gullet and Stomach.

Idem.

XXV. All Vomitories are bad given in substance.

Idem.

XXVI. Let us not be moved by the authority of grave Physicians who dread the use of Antimony, whereas in the mean time they make use of *Asarum* that is no less strong and violent: for whosoever uses *Asarum* to cause Vomiting, may also use Antimony, seeing it is both a more grateful Remedy, and also turns the Stomach with less danger and far more easily, and attracts from the more inward parts, especially if the infusion be rather taken than the substance; for then its vertue penetrates deeper, nor does it give so great molestation to the Stomach, and in some, yea very often, it works also by Stool: And if it be rightly and duly prepared, any one may use it safer and with less danger than *Asarum*, whatsoever some clamour to the contrary, who fear all things that are safe. White Vitriol is stronger than Antimony, and Tobacco is stronger than either, exagitating mightily and beyond measure: yet I have known many use it with good success both in infusion and substance.

Primicof. l.
2. de febr.
c. ult.

¶ Antimony is the most excellent of all Emetics, and weakens least of all: Yet its substance ought not to be given, but only its infusion, which let it not be prepared of the Glass, but only of *Crocus Metallorum* that is very pure: for this is the safest of all the preparations of Antimony, & breaths a kind of Balsamick vertue upon the viscera after its operation. Other Vomitories which those who are, and will be called Galenists, use ordinarily, made

made of *Afarum*, the flowers of Broom, white Hel-lebore and other such like, besides that they are ungrateful and indiscretely compounded; they are far worse and stronger than Antimony; as I have a thousand times found by Experience.

Idem l. 3. c. 2.

¶ Amongst Vomitories I here prefer *Antimonials* before all the rest, both because they do most happily evacuate all Humours promiscuously; and also because they are most friendly to Humane Nature, in a peculiar manner reducing by degrees all the Humours in a man to the most laudable state; which vertue whether it be to be met with in other things, I make a question; that it is in Antimony, I know. Yet we must take heed of administering them in too great a quantity, &c. For being rightly prepared and used in a less quantity they hurt no body, as I can testify from a thousand Tryals: but in such case they always profit, either by amending the noxious Humours in the Body, or by further preparing them for the Purgation that is to follow after.

Fr. Sylv.
Pract. l. 1.
c. 23.

XXVII. The infusion of Antimony or of its Glass in distilled Vinegar hath that benefit, that the very substance of the Antimony is fretted off by the acrimony of the Vinegar, which being fretted off sinks to the bottom: Now if such infusion be prepared for several Doses, the first that are poured off will work but little; but when you come to the bottom, if you think to give the like quantity as you did before, you should cause the Patient to be either intolerably griped, or even to die.

Walzusp. 59.

XXVIII. Spanish wine extracts but little of its vertue; but French wine or Rhenish a great deal, because they incline to an acrimony: Red wine also extracts better than white. Spirit of Wine extracts nothing from Antimony.

XXIX. 'Tis in vain to prescribe the Dose of the infusion of *Crocus metallorum*; for the stress lies in the quality of the Liquor. No recipient receives by the measure of the impressor; but by the measure of its own receptivity.

Idem.

XXX. *Antimony* prepared, or *Crocus metallorum* are prescribed to four or eight Grains; yet we seldom go so high as this last Dose, nor do we use it at all but in infusion.

Idem.

XXXI. Note that *Aromata* (or Spices) are not prudently added in an infusion of *Antimony* for Corrections sake, seeing by this means the endeavour both of Nature and of the Medicine is inverted. For if that Infusion be given for this reason, to evacuate vitious Humours both out of the Stomach and neighbouring Parts, it ought also to exert its operation upwards: And why would we weaken its vomiting vertue by strengthening the Stomach with Spices? while on one side Nature is stimulated to expulsion, she is on the other held bound with fetters as it were, and hindered from doing that which she intends to do; and so she is interrupted in her operation and becomes doubtful. If we will strengthen the Stomach, let us do it after the vitious Humours are discharged out of it by vomit: And therefore the poisonous quality of the glass of Antimony is better corrected by Nitre alone, as *
Zwelfer admonishes.

In Append.
ed animadv.

XXXII. The glass of Antimony uses to work strongly, being for the greatest part, or altogether deprived of its Sulphur in the Preparation: the Dose of the Powder is from four Grains to six; of the infusion in Wine from six Drachms to ten. The flowers of Antimony are a fiercely vomiting Medicine, because in its preparation the saline and sulphureous Particles ascend (having shaken off the watry and earthy) and are combined together; so that the mineral Body being very much unlocked, and the most active Corpuscles (the more dull which blunt these, being laid aside) joined together, the Dose is only from two Grains to four. *Crocus metallorum* works kindly enough and is a very usual Emetick: it is given in substance from three Grains to five;

the infusion of it in Wine from half an Ounce to an Ounce and half. The Sulphur of Antimony works more kindly and gently than any other Preparation of Antimony: the Dose of it is from five Grains to ten. *Mercurius vitæ* contains no Mercury in it, because being deprived of its congelative Salts it resumes its former species of Quick silver (It is made of equal quantities of choice Antimony and Mercury sublimated.)

Willis
Pharm. rat.
p. 65.

XXXIII. *Angelus Sala's* Emetick Syrup, called by others *Oxyssacharum vomitivum*, doth excellently clear the Stomach that is loaded with thick Phlegm. *Gregorius Horstius* tom. 2. p. 483. gave a Drachm of it to an Asthmatick Woman, whereby she was cured by vomiting up some pounds of thick Phlegm. Less judicious Physicians might be afraid of choaking the Patient, as if the Passages appointed for respiration would be made straiter in vomiting; but viscous Nature grants space for respiration betwixt the Vomits: The same is to be observed in a suffocating Catarrh. I use that Syrup frequently, and should desire no alteration in it unless that the taste of the Vinegar might be somewhat milder, of which some Patients complain: therefore I often add a little of the Julap of Roses or the Syrup of Cinnamon. ¶ *Sala* gives it from two Drachms to six: *Horstius* observed that in the adult it may safely be given to an Ounce. See his Seventh Book of Observations, Obs. 30.

Hoff. Her-
cul. Med.
p. 118.

XXXIV. I remember that I have read that white Vitriol was prescribed by *Heurnius* to two Grains: but that does nothing; it must be taken to half a Scruple, twelve or sixteen Grains.

Walzed

XXXV. If much filth load the Bowels, especially the Stomach, gentle Vomits with *aqua benedicta* are to be prescribed: for it has this peculiar vertue, that it not only throws out the filth, but also inflames the Stomach to Concoction; whence after the use of *aqua benedicta*, we always observe the appetite, even though buried as it were for a long time, to be revoked and increased.

Hartman, Pr.
chym. p. 184.

XXXVI. When a Disease yields not to the vertue of Antimony, white Hellebore is called in to assist, if the Patient be strong. *Herophilus* compared it to a valiant Captain, for having mustered all within he said it marches first out: that therefore the Ancients mistook in giving it in too small a Dose, seeing the more of it is given, the sooner it comes forth: But then it must be accurately prepared, seeing, as *Oribasius* witnesses, heretofore many have been kill'd by it, because they knew not how to prepare it.

Heurn. Meth.
med. lib. 2.
c. 21. where
he delivers
divers Pre-
parations of
it (amongst
which he ex-
tols the
Quary) and
divers cau-
tions in giv-
ing it.

XXXVII. The same thing almost is to be corrected in *Quercetan's* Oxyssel of Tabaco, where also the quantity of the Vinegar is too great; and of the Tabaco too little for the intention of raising a Vomit. Therefore I think that the weight of the Tabaco ought to be doubled. The Dose is two or three Spoonfuls by it self, or with some pectoral Decoction. It is approved of by *Horstius*, &c.

Hoff.

XXXVIII. In the giving of Vomits with Preparations of Vitriol, we must carefully take heed of an Asthma and other Diseases of the Breast.

Beguini tyro-
cin. l. 2. c. 17.

XXXIX. Amongst Vomitories I prefer Antimonials before all others, as often as Cholera chiefly offends; where Phlegm abounds, I commend *Mercurialis*, either alone or mixt with other things, because they do above all other bring forth tough Phlegm, and moreover incite it.

Sylv. Ap-
pend. tract.
8. § 160.

XL. Among the stronger Vomitories we use now adays, is the salt of Vitriol rightly prepared, of Vitriol rightly calcin'd: For if the calcin'd Vitriol acquire not a dull purple colour, you shall extract nothing but a Vitriol of the same colour, and shall obtain no white Salt: But if you exceed, and so by calcining the Vitriol too much spoil it of its acid Spirits, you shall not get much of that Salt out of it which will vomit. *Sal Martis* rightly prepared of *Vitriolum Martis* has a better vertue; *Quercetan* (in tetrad:

A a a a a a

af

off. capit.) bestows on it the name of a celestial Manna. A. Sala in his ternary of Vomitories commends it to the Skies. Yet note from Zwelfer (in Append. ad Animadu. p. m. 7.) that this is improperly called a Salt, seeing it is nothing but the substance it self of the Vitriol separated from all impurities and metallick substance, seeing 'tis commonly prepared without any preceding calcination, only by repeated Solutions, Filtrations and Coagulations, whence it ought to be called, *white Vitriol vomitive*, and not *salt of Vitriol*.

Frid. Hof-
man. m. m.
p. 112.

Idem l. i. c. 9. lity.

XLII. The *glass of Antimony* is not given safely in substance, but 'tis more safe to use it in infusion, or by correcting it with Nitre only, for the amending its noxious Nature: For because it is nothing but the meer Marchasite of Lead, having in it an Arsenical Mercury, and an external auripigmental Sulphur, certainly it is not void of all poisonous quality.

XLIII. Dioscorides says that *Vitriol* causes vomiting, which is to be understood of the crude, for being badly prepared (Chymists call it *Gilla*) it causes a mortal vomiting and death. One to empty his Stomach that was overcharged with salt Herrings, took a *Gilla* prepared by himself, and died on the same day vomiting: His Stomach was found perforated in three places, excepting only the thin outmost coat to which the *Gilla* stuck fast and had eaten into it.

Hein. ab
Heers de
Acid. p. 28.

XLIV. Salt of *Vitriol* is prescribed to be made divers ways, viz. of an elixivate Colcothar, of a blue calcin'd and elixivate *Vitriol*, according to Ang. Sala; and of white *Vitriol* purified by often solutions and coagulations, which Medicine is commonly called *Gilla Theophrasti*, and is altogether safe and easie to make: Yet the two first Medicines are notably styptick, and, inasmuch as they have endured the fire, are somewhat corrosive: but the last being kindly enough does gently pull the Fibres of the Stomach, and causes them somewhat to contract themselves, so that for the casting off what is troublesome they are at length convuls'd and cause strainings to vomit, yet such as soon pass over, and the disturbance of the Stomach is allayed in a short time. Salt of *Vitriol* is the more esteemed, because it seldom gives any disturbance beyond the Stomach, nor like Antimonials brings on Convulsions of the viscera and disorders of the Blood or fainting away: yet it is blamed, for that it works but dully, and sometimes not at all; so that after the taking of *Vitriol* and drinking a great deal of Posset-drink 'tis often necessary to provoke vomiting by putting a feather down the Throat, or by drinking *Carduus Posset* or oxymel of Squills.

Willis
Pharm. rat.
p. 60.

Idem ibid.

XLV. *Afarum* is better in infusion than substance, for thereby it becomes milder: in Decoction its volatile virtue is more driven away, whence it almost ceases to be a vomitive, unless it be boiled but gently. I have observed the root to be milder than the leaves. A strong man died of a superpurgation that had taken a spoonful of the Powder of the leaves, Antidotes being given in vain.

Gr. W. Wedel. de G. m. fac. p. 161.

XLVI. Divers descriptions of *Rulandus's aqua benedicta* go about, some affirming it to be made of *crocus*, but that of the Author himself is the best (Cent. 5. obs. 95.) Take of *crocus metallorum* from the bigness of a Lentil to the quantity of a Pease, of Water, Wine, Beer, Mead or other Liquor proper for the Disease, as much as suffices: Steep it for a Night, or in case of urgent necessity boil it: strain it, and the Dose is from half an Ounce to two Ounces.

XLVII. But note that that *crocus metallorum* (which I would have to be understood also of all other Antimonial Emeticks, for so even the gla'ss may be given, and that made by it self without Borax) is not here to be made use of that is made with the addition of Tartar, but that which is made of an equal quantity of Antimony and Nitre alone; whether the whole be detonated all at once, by putting

a live-coal into the Mortar, or successively, which latter falls in with the gla'ss of Antimony: but the other is more dull, and is not so useful for these purposes, but more for Eye-salves.

Idem.

XLVIII. Antimonials are corrected and rendered more mild, 1. By *Infusion*, for they are of an inexhaustible virtue, and that both in watry things, which extract but weakly, and also with tartish things, as Wine, which is better, whence is *Rulandus's aqua benedicta*. 2. By *Precipitation* with Salts, such as is *Mercurius vita*, commonly so called, though it have not the least smack of Mercury, a Vomitory good enough, and is nothing else but the Flowers, or precipitate rather of Antimony, loosed and devoured by Salts, and then freed and sweetened by simple water. See that you do not exceed in the Dose, for it is not to be given to above three Grains unless there be great necessity. 3. By *impregnation* with Tartar, which correction is the best and safest of all; namely when *crocus metallorum* rightly prepared without salt of Antimony, like the gla'ss of Antimony are boiled with crystals of Tartar and filtrated, and the crystals arising thence are given to one, two or three Grains. And this at this day is the best and most usual Vomitory among the choicer Practitioners and Chymists, which never fails if it be rightly prepared, wherein there is no small cunning: for thus its violence is kill'd as it were, and its virtue being unclosed and conjoined with the Tartar is obtain'd in a *Compendium* as it were, whence we have often given the same very safely even to Infants.

Idem.

XLIX. The *glass of Antimony* is prepared divers ways, and so of a different colour: but that is deservedly preferred, which is prepared of Antimony alone, without the addition of any other thing, by calcination, and then fusion: It is both a very good Vomitory, and also a Purger by Stool, evacuating very well all offending Humours. Being ground it is infused for a Night in a convenient Liquor, as French Wine, Rhenish, Canary, &c. Beer, distilled Water, Hydromel, Vinegar, vinegar and Sugar, &c.

Franc. de le
Boe Sylv. m.
m. l. 2. c. 10.

XLIX. Of the gla'ss of Antimony is made a vomiting *sapa*, whereof I have very often experienc'd a commendable effect: it is a very grateful Medicine, to be taken to the bigness of a Pepper-corn or an indifferant large Pease, in any Liquor that is acceptable to the Patient. As this *sapa* is prepared of the gla'ss of Antimony with Must (or new Wine that has not wrought) so with the thickned juice of fragrant Apples, Pears, Plums, Quinces or the like may there be prepared *Mixa*, Syrups, Rob, and Medicines of other names, very fit for bringing forth any Humours by Vomit, and withal safe and grateful. And this above all others does the gla'ss of Antimony perform, which many would more esteem of, if they rightly knew what vertues lie hid in it.

Idem ibid.

L. I have more than once prepared a tartish Syrup, or rather *Mixa*, of Quinces, viz. of their juice alone boiled to the consistence of a Syrup by a gentle fire; a laudable effect whereof, and often very different, I have oft admired. If you give half a spoonful hereof to Infants, or more to the adult, it incides glutinous Phlegm, and sometimes brings it up out of the Lungs by coughing, sometimes out of the Stomach and small Gut by vomiting, and sometimes expells it from the same Parts by Stool: And which is greatly to be esteemed of, it also adds strength to the Patients, and happily restores them; so that by this one remedy I have recovered many Patients that have loath'd most other Medicines. But it is chiefly profitable for evacuating and correcting Phlegm.

Idem ibid.

Uterines,

Uterines, or Remedies for the Womb.

(See of the Diseases of *uterus* or Womb in general, Book 18. and the suppression of the *Menstrua*, Book 11.)

The Contents.

They respect either the Vessels and passages. I.
Or the Blood; II.

Or the *genus nervosum* and substance of the Womb. III.
Or the extravasated Humours. IV.

In what kind of sweet things the Womb delights. V.

Whether acids are hurtful to it. VI.

Volatil Pellents are to be avoided in Women with Child. VII.

How we must use *Aperients* and *Astringents*. VIII.

How we must *astringe* in Women with Child. IX.

What sort of *Astringents* are convenient. X.

Purgers provoke the Terms. XI.

I. **H**ystericks respect either (1.) the vessels and passages which should lie open for the Blood to pass out by; and so hither belong *Aperients*, and such as remove obstructions or stoppages; as also *Incisers* and *Cleanfers*, both internal Saline and Sulphureous Medicines, and also external, as Baths, Clysters, Suffumigations, Pessaries, and other Abstergers.

II. Or (2.) the contents of the Vessels, or the Blood. The motion of the Blood to the Womb, is like that of the sea to the shoar, and it is Lunar, for Women that are in health have their Blood flow hither every month. To this littoral or shoar-like motion of the Blood to the Womb, have *Uterines* respect: And those are 1. *Promovents*, which procure a fermentation, turgescence and motion, either by rarefying and attenuating, which are particularly called *Emmenagogues*, such as are volatil oleous things, endued with a volatil Sulphur, as Savin, Saffron, Angelica, Myrrh, Camphor, &c. Saline things, the Salt of Mugwort, Borax, and especially volatil, as Scurvigrals, the Spirit of sal Armoniack, and other Acrimonious things: Bitter things, as especially Aloes; whence *Elixir proprietatis* is excellent for the Green-sickness: *Aromaticks*, which at once Remedy the glutinousness of the Humours, free the mouths of the Vessels from what obstructs them, and remove the phlegmatick, tartareous, and mucilaginous Humours that cleave about them, and dilate the pores, and in a word, make the passages free and open, and kindly solicit Nature to excretion. Where we must note by the way, That whatsoever things provoke the Terms, the same do also hasten the exit of the *fetus*, and expel a false conception or mole: yet stimulators are not the only things which do this, but comforting Balsamicks, as the oyl of Amber, Cinnabarines, Cinnamon, and divers preparations of these things. Yea hither belong also Purgers themselves, which often procure the flux of the Terms on the very day they are taken, for even they do both stimulate and drive forwards, and also add a new fermentation to the Blood: *Diaphoreticks* also, especially the Volatil. Or else by absorbing acid, sower, styptick Humours abounding, and too much fixing and concentrating the Blood, such as are fixt Medicines, but not all alike, for Crabs eyes, or chalk, shells, corals are not reckoned among provokers of the Terms, nor have they place in that case, but such as do more intimately sweeten and saturate the said Humours, such as are Steel-Remedies above all other. So that he who would happily cure the obstructions

of the Terms, may do it best of all with Steel-Medicines, such as *crocus Martis aperitivus*, *vitriolatus*, *saccharinus*, *Quercetan's* cachectick powder, or his Stomachal mixt with Martials, adding (for instance) the oyl of Cinnamon, which does very commendably serve this intention. 2. *Bridlers* and retarders, whether the Blood be too serous, and Acrimonious, or cholerick, unlocking and gnawing asunder the mouths of the vessels, or whether it issue plentifully through the breach of some vessel, or other hurts. Now this excessive fermentation and turgescence, is restrained both by watry coolers which temper and dilute the volatil, saline, and sulphureous parts abounding in the Blood; and also by earthy and styptick things which precipitate, separate, bind and hinder the motion of the same, as Plantane, Shepherds-purse, Corals, *Hematites*, and other things to be fetcht from astringents, likewise acid and sower things that do infringe and tame the said parts, as the Spirit of Vitriol, its tincture, the tincture of Violets, and Roses, the styptick antiphthick tincture of *Garmannus*, which does good in the immoderate flux of the Terms, and *Opiats* themselves. All these, I say, benefit in the immoderate flux of the Terms or *Lochia*, and also partly in the Whites.

III. Or (3.) the *genus nervosum* and substance it self of the Womb, as it is known that it is membranous, has a very great consent with the head, and is plentifully stored with Nerves: Medicines of this sort are the Nervine, enumerated under the Cephalick, things endued with a volatil Balsamick Sulphur, spirituous things, pleasant things, as Balm, Rosemary, Sage, &c. Castor, Amber, both which are full of an oleous volatil Salt, &c. and above all others, Cinnabarines; as it is certain by practical experience, that native Hungarian Cinnabar does greatly relieve hysterical distempers and convulsive motions of the Womb; likewise preparations of an humane secundine, Ivory without fire, and preparations of Harts-horn and the like, whereby it appears that that Medico-practical rule, That all Cephalicks are Uterines, or that all Cephalick Herbs in specie do also respect the Womb, and on the contrary, does hold chiefly in this sense, because of the society of substance, and agreeableness or analogie of the nervous parts. And these, especially the comforting *Aromaticks*, are Uterines, and profit particularly in the hysterical suffocation, and its various degrees, and consequently in fainting, swooning, &c. The same are approved in hard travail, inasmuch as they either strengthen Nature and the Nerves, as Cinnabarines; or do withal stimulate, as the oyl of Cinnamon, of Amber, &c. Also in the pain of the Womb, and *fluor albus*, or Whites, inasmuch as the compages of the Blood is too loose therein, and the serous ichor outweighing the oily parts of the Blood is cast off through the looseness and weakness of the fibres accompanying: whence such Uterines as are strengthening, and the oleous Balsamick (as Rosemary) profit in this case. From hence it is clear why Vinegar is called by *Hippocrates* *ὀξεγγυς* (or a Painer of the Womb) namely because it is offensive to the Nerves, because it fixes the Blood, and depresses and subjugates its sulphur and saline volatil parts: for otherwise when there is an intention to incise, or to tame the Sulphur, as in the *amor insanus*, or in the immoderate flux of the Terms, 'tis very proper, if it be not given in too large a dose.

IV. Or (4.) the extravasated Humours stagnating about the Womb, and *flatus* that arise from thence, putrid filth, &c. which case indeed often happens, and creates divers cruel Symptoms: of this sort of Medicines are 1. Balsamicks resisting putrefaction, Bitter, Gummos and resinous things, Aloes, Myrrh, *Scordium*, *asa fetida*, *Galbanum*, the essence of Amber, of Myrrh, of *asa fetida*, the Uterine Elixir of *Crollius*, &c. 2. Resolvers of the cloddiness of the extravasated Blood, whether already clodded or

or but a clodding, as Chervil, Crabs-Eyes *Bezoardicum Martiale*: Antimonial and other such like do notably dissipate whatever stagnates, and take away convulsive and hysterical Symptoms arising thence. 3. *Dissolvers*, *Diaphoreticks* and the more penetrating *Sudorifics*, as *tinctura Bezoardica*, the Spirit of Tartar, *mixture simplex*, which it self also purges out putrid filth, and Diureticks also themselves do notably cleanse the Womb. 4. *Carminatives* in a special manner, for *Carminatives* are the best *Uterines*, and as Practitioners have experimented, the same things that are good for the Colick do also help fits of the Mother, as the Carminative seeds, Zedoary, Galangal, *essentia carminativa* with the Uterine Elixir, the Tincture of Tartar, *Bezoardicum Martiale*, which are very excellent in the Hysterical and pains after travail. And these are good in Uterine *stasis*, which I have observed in a cacochymical Woman to be discharged out of the Womb like the *stasis* of the Belly; and also in hysterical suffocations produced thence, and from the putrid Blood stagnating there; likewise when the flux of the Terms and *Lochia* are painful, with anxieties, pains of the back, gripings, &c.

V. It is a rule amongst Practitioners, That the Womb is demulced by sweet things: But it is hardly to be understood of sweet things that are actually such absolutely, which indeed, where the fermentation of the Blood is to be renewed, have a notable use, inasmuch as they promote its turgescence; also in a fear of Abortion Honey is good outwardly, or Bread soaked in Honey and Sack: yet where the Blood is to be bridled, as in a too great flux of Blood and in other cases, they rather do hurt: So things sweetened with Sugar and Honey are naught for the hysterical, for they raise disturbances, and reprove and exasperate quieted symptoms.

VI. Acids (which follows as a Confectary from what has been said) and sweet things, are neither always to be abstained from, nor to be used promiscuously: This chiefly holds of Vinegar, for it is but little furnished with Sulphureous Particles; But such Acids as are Sulphureous withal, as the Cephalick Spirit of Salt, Nitre or Vitriol, are more friendly to the Womb; whence *Syrupus Byzantinus*, Oxymel simple, and that of Squills, and other acids hurt the Womb; but these being moderately Sulphureous may be used upon occasion. This appears from Diet; for if a Woman that has her Terms flowing eat Salads or other acid things, they are stopt thereby; namely because they are adverse to the tone of the Womb both as to the turgescence of the Blood, and also as to its own Nervous substance.

VII. In Women with Child Volatil Pellents are to be avoided: whence if the case be doubtful, whether a Woman be with Child, or only her Terms are suppressed, we hardly use to rise higher than Steel Remedies, which do not hurt, but do withal strengthen: Otherwise attemperaters and astringents are proper for them, as to the Uterine Vessels; and spirituous things, as to the vital strength of the *fetus*.

VIII. When we would open, strong Pellents alone are not proper; but moisteners withal are to be used: where we would bind, let not driers be omitted. Hence those Physicians err who in the stoppage of the Terms use only volatiloleous things, as the Oyl of Juniper, the Spirit of Sal Armoniack, the oyl of Savin, Borax and other things: for hence Whores do often use Savin and the like in vain, when they are not disposed to Miscarriage: namely we must withal have regard to the Serum, which is required as much as the Blood to turgescence. Whence I have always done more by moisteners, as *tinctura Martis tartarificata*, *tinctura Martis pomata*, uterine Infusions and Decoctions, than by other things.

IX. In those who are not with Child, we must not bind without revulsion; and in those who are,

not without regard to the *fetus*. As for example, If any labour under an immoderate flux of the Terms, which often springs from an obstruction of the Vessels, (which obstruction must be remedied) astringents are more profitable when you have first Bled; But if a Woman with Child have her Terms flow, the weakness of the *fetus* is always to be regarded.

X. In the use of astringents also the tone of the Womb is always to be respected, both as to the Blood, and also as to the looseness of the Fibres. Hence in the *fluor albus* or Whites, the common Astringents are not so profitable alone, as when Aromaticks are mixed therewith, as Rosemary, Chervil, Ivory, Castor, the magistery of Crabs Eyes, with the oyl of Anise, and of Amber, which is excellent, for otherwise there will be no good success.

G. W. We.
dél. de f. m.
fac. p. 117.

Vulneraries.

The Contents.

Internal Vulneraries are either of an Alkaline nature; I.
Or of a Balsamick. II.
They are not good always and in every case. III.
They are withal Resolvents, and dissolve clotted Blood. IV.
Externals act diversly. V.

I. **T**Raumaticks or Vulneraries are either internal or external; both are indicated by solution of unity in general, whether they be wounds, or bruises (especially with the hurt of the inner parts) or Ulcers, or Ruptures and opened Orifices of the Veins, falls from on high, spitting of Blood, Dysenteric, &c. in all which they are very good. But it being supposed that the Blood is the aliment of all the parts, 'tis necessary when there is solution of unity, that this also should be amiss; and therefore we must have regard to this, that it may the slier dispose the injured part to consolidation. Now they are chiefly of two kinds; either 1. of an Alkaline nature, which you may find largely discussed by Helmont: For he determines (not unfitly) that in every Ulcer there arises an acidity that is the token and companion of all putrefaction in the flesh, and that Alkali's do easily absorb it into themselves and consume it: so that all vulnerary potions contain in them an occult Alkali, and that volatil, if they be to resist the accidents that spring from the corruption of the acidity, inasmuch as every alkali kills every acidity it comes near. ¶ Let us apply hither that place of Galen 2. aph. 17. concerning the acidity of the Blood, where he says, The same thing that happens in Wines which grow sour, does also happen in the alteration of the Blood. Seeing therefore in wounds both the tone of the Blood is altered, and that it necessarily concurs to their cure; hence Vulneraries are such as absorb the acidity, and preserve the tone of the Blood, and likewise temper both acrimonious and ferous Humours, and moderately deterge. And such are the Alkalines in a special manner which have been already mentioned, as Crabs Eyes, which do both help in the foresaid wounds, and being boiled in Wine acquire a lixivious taste. So likewise *Antimonium diaphoreticum* is with very good advice taken within the Body in outward Ulcers; and thus the very Antiseptic of Peterius is good in a phthisis for this reason; and the Plants called traumatick, that is, which either have a nitrous detergent faculty, or something that is astringent and earthy, do respect the tone of the Blood

Blood and greatly resist putrefaction, and reduce preternatural ichors into order.

II. Or 2. they are of a *Balsamick* nature, and vigo-
rate the Blood by their volatil oleous Salt, that is
both strengthening and astringent. Thus *Fèvre*
(in a *Chymical tract*) relates, that a certain Surgeon
in all wounds did presently give some Nutmeg in
a draught, that the Blood might be vigorated by
its Balsamick vertue, and so all things might be the
fittler disposed for consolidation: And though these
Internals do not hasten in their substance to the
wound that is remote, yet they dispose the Blood
so as that parts divided may be the more apt to
close together again.

III. It is to be noted that vulnerary potions are
less convenient 1. in the beginning, whilst the flux
lasts, lest the Humours be further driven into the
part affected: 2. They are not so good in Wounds
of the Head, which do rather require driers out-
wardly, and Nervine absorbers inwardly; but
are better when the Limbs, or other *viscera* are
hurt; for through their same vertue they dissolve
the clodded Blood and strengthen its tone. 3. Re-
spect is also to be had to the Stomach, that it be
not hurt by them. Add 4. that the first region
ought not to be foul. In the year 1679. in Decem-
ber I had under cure an Inn-keepers Wife of Gene-
va at the sign of the three Kings: This woman
having an Ulcer in her Womb, by the Womens
advice (without my consent) took two vulnerary
potions, whereupon she fell into a Fever: But
she was cured by Injections of decoctions indued
with the same vertue.

IV. 'Tis observable that these Traumaticks are
most of them withal Resolvers or Dissolvers of
clodded Blood of both kinds, as Crabs-Eyes, Sar-
cocol, Myrrhe, Yarrow, &c.

V. These same things, of both kinds, being ap-
plied outwardly and immediately, are notably be-
neficial. Thus also Balsamick Sulphurs, native
Cinnabar, the fixt Sulphur of Antimony, &c. Of
the same stamp are also external Traumaticks,
Sarcoticks, which are either 1. moderately drying, of
an earthy and Saline, or Alkaline nature, as Ce-

russ, Pompholyx, Litharge, which do both astringe
gently and also strengthen, and remove impedi-
ments, and waste and absorb superfluous moisture,
and strengthen the lips of the Ulcer and Flesh;
so that it is made like to that which is sound,
and is not proud. Thus such like absorbing pow-
ders do often consolidate Ulcers that are stubborn
and hard to close through over much moisture
and looseness of the Lips of the Ulcer, which I
have sometimes observed. Whence it may serve
as a Rule, *Whensoever ulcers abound with superfluous moi-
sture, these moderate driers, and especially strengtheners, are
good, far before oily and emplastick things.* Thus dry
lint alone is useful in the wounds of the nails and
other fleshless parts. Likewise the powder of
Crabs-Eyes being sprinkled on fresh wounds heals
them, for it presently seasons as it were the flesh
and injur'd parts, so that they remit nothing of
their Balsamick vigour, nor conceive *pus*. An in-
curable ulcer has been healed up by pompholyx
alone; a corroding one drilling with a continual
moisture, only by the powder of Ceruss: Thus
also in wounds of the Head moderate and temperate
driers do the business; and on the contrary all
fat oily, unguentous things, and fat Plasters are
not at all good; unless one should perhaps except
such as are nervine, as the Balsam of Peru. 2. Bal-
samicks, whether they be *Gumms* and *rosinous simples*, as
St. Johns wort, Aloes, Gummi Elemi, (which is
excellent for stabs) Mastich, Frankincense, &c. or
oils, both made by *expression*, as the green oyl of El-
der, which being taken inwardly is a notable vo-
mitory, and outwardly is a Vulnerary; and by
boiling, as that of St. Johns wort; and by *distillation*,
viz. simple, as the stinking oyl of Tartar, which
consolidates very powerfully, and may easily be
boiled into a Plaster with wax; the oyl of Tur-
pentine: Likewise *Balsams*, both the native, as the
Indian of *Tolu*, and also artificial, as Plasters: But
all Plasters almost agree in this, that they defend
wounds from the Air, and cherish the part by their
moderately drying Balsamick vertue, as in parti-
cular Lead-Plasters are on that account very fa-
mous.

A

GUIDE

TO THE

Practical Physician.

BOOK XX.

Of the Office of a Physician.

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I. **S**ome Physicians have indeed got themselves Authority and Esteem from a popular Opinion, but from no Merit of their own. Plato makes such to be far different from Ingenuous, Liberal, and Noble Physicians, of the true race of *Asclepius*. Hippocrates, *l. de Præcept.* shews the cause of their Reputation, which, he says, must be ascribed to some wealthy and powerful, but stupid and ignorant Men, who having been cured by them of some Disease at hap-hazard, do cry them up: or to some Covetous rich Men, who in stead of giving Fee, use to extol unlearned Physicians with false Commendations. Or they have got a Name, because they have cured Diseases, that were either difficult indeed, but acute and salubrious, which though they be conquered by the goodness of Nature, yet the Cure is ascribed to some slight Medicine or other; or they are Chronical, and in the declension. And happy is the Physician, that is called in the declension of the Disease: for he wins the day without striking a stroke, and reaps the advantage of another Man's Victory.

Zwingerus.

II. Let him not imitate villanous Physicians, who by Deceit and Cheat endeavour to get themselves a Name, which they cannot get by their Desert. While he praises his own Pains, Diligence, and Success, and ceases not to reprehend and accuse others Cures as bad and unsuccessful. Or he undertakes not any Disease but only *ὀρεσζωδία* or a Noisy one. For what meaneth Hippocrates his *ἀδύνατος ὀρεσζωδός*? *ὀρεσζω* signifies to prate or make a Noise: Therefore the Disease is *ὀρεσζωδία* or Noisy both in respect of the Patient and of the Physician; Every Disease of a Great or Wealthy Man is *ὀρεσζωδία*, because though never so slight, yet the Disease seems dangerous because of the Honour and Power of the Patient; especially, when, as he said before, villanous Physicians are extolled for some easie Cures, but which they have dissembled both by word and deed to have been very difficult, so that by the craft of the Physician every Disease shall make a great Noise, which he hath in words set out to be dangerous. Therefore Celsus, *lib. 11. c. 9.* says, that it is Jack Pudding's part to extol a small thing, that he may be thought to have done something great. And by such report they intrench themselves, as in a Fort, that if any thing unexpected should happen, it may not be ascribed to their want of Skill, but to the violence of the Disease.

Idem.

III. There is no part of a Physician's Office more illustrious than Consultation, because by it alone unlearned Physicians are known from the Learned, who practise Physick like as the Learned, and impose on the rude multitude: And there is nothing that brings greater advantage to the Sick.

Claudius.

IV. Discord among the Consulters is to be condemned, because the stiffness of private hatred prompts them to a common mischief, and oftentimes ruins their Patients health. We must indeed sometimes oppose other Mens Opini-

Opinions, if they appear not to be salutary; but it must be according to the Laws of Reason and Experience: and we must with candor always acquiesce in their Advice, who excel in Judgment, Experience, Reason, and Plurality.

Ranchinus.

V. Physicians must hold their Consultations apart from their Patients, to the end every Man may more freely speak his fears or his hopes; For fear is not easily removed out of a Patients Head, when he is once possessed with it: And apart from the People, admitting one Auditor, or at most but two, who may take care of the Sick; For the Vulgar, or he that is ignorant of the Art, ever has something to add, or to abate, or to condemn in the Counsels of Physicians, and he finds fault with all things, if as much heed is not given to his impertinencies, as to the wisest Physician; and so much the more, if the Remedies resolved on do not cure the Disease. Besides, if any one of the Physicians have a spark of vain-glory in him, he will be exalted and sawcy, when he has a Crowd about him, altering those things which another has propounded before, and extolling what he shall propound, yielding not the least to Reason, but loses the time in prolix trifles. In the mean time the poor Patient suffers, who is in no fault.

Notallus.

VI. A faithful and true account of the Diseases, their Causes and Symptoms wherewith they are troubled, must especially be required of the Patients. For many (as *Celsus* says) die through their own fault, especially Women, while their Modesty will not allow them to reveal the secret Diseases of their Bodies.

Ranchinus.

VII. The strength of Nature, which rules in our Bodies is admirable, not altogether conspicuous to Human Ingeny, for oftentimes, when to us she seems oppressed by the Disease, and knocked down dead, so that she is unable to defend her self any further, what succour soever you bring her; yet she often, by some occult faculty, takes heart again, rallies against the Triumphant Enemy, and in a fresh Combat often comes off Conqueror. Now since it is so, and since oftentimes such unexpected Events have convinced us, that as long as there is Life, there may be hopes, we ought not to despair. Besides, *Hippocrates* himself acknowledges that predictions of Life and Death are not always so certain: therefore we must not utterly deny a Patient all Remedy, how desperate soever his case is. ¶ To deny the taking those in hand, in whom there is no hope of recovery, is not in all cases to wave the name of a bad Physician, yea sometimes it gets a Man the disgrace of impiety, especially if Parents, or Kindred desire it. For it is a Pious thing, (not omitting the Prognostick) though death, or some incurable Disease be upon a Man, while the Patient has his Understanding entire, to comfort him, put him in hopes, and, as much as may be, to assuage his Disease by Remedies.

Dietericus.

Notallus.

VIII. Let a Physician be doubtful in his Prognostick, unless there be most certain and

infallible signs of death: Let him be moderate in his promises: Yet let him always give hopes rather of Health, than foretel certain Death: For when the Patient is given over by the Physician, if he do recover afterwards (as he often does) either by chance or Nature, the Physician incurs Infamy. But if he give hopes of Health, and Death does follow, the Disgrace is not so great; because many things might happen, Errors, Excesses, and some new Diseases, and the change from Health to Death is easier than from Death to Health, which by the course of Nature is impossible.

A Castro.

IX. In some Diseases great regard must be had to Mens way of living, otherwise they will hardly be cured, and so many good and admirable Cures have been performed. A certain Cleanser of Jakes, when he had been used to good Scents a while, fell sick, and when no Man could cure him, he recovered by smelling to his old Scents. I knew a Physician, that cured a Country Fellow, whom the Physicians had given over, by prescribing him a Country way of living, as Pulse, Ryebread, &c. And I have observed, that the Region where we live makes strong Impressions on us, which ought to be regarded; for as we are at Sea inclined to Vomit, which ceases as soon as we get on Land again: so I knew one that lived on the Sea, who was as much troubled with Vomiting on Horseback, as we are at Sea. ¶ I knew a stout Soldier,

Borellus.

X. It is *Celsus* his Judgment, *L. 1. c. 3.* that it is not very safe to go out of a wholesome Air into an unwholesome, nor out of an unwholesome into a wholesome Air. And this is in a state of Health. For in Diseases he tells you in another place, *L. 2. c. 1.* that that Air is worst for a sick Man which made him sick. In a Pestilence, which rages through the Infection of the Place and the People, Change of Air is good. *Galen* sent Consumptive Persons to *Tabie*; *Pliny* sent them to the Woods. It has done several among us good in Quartane Agues. Only we must have a care the Alteration be not sudden. Therefore in *Italy* they take a very good course in their Hospitals, they turn those that are upon recovery into a spacious Room, especially at *Naples*, that by degrees they may be used to the Air; before they go abroad. If the place cannot be changed, yet some alteration in the Air at least must be procured, which must be open, tempered and corrected with fragrant and Alexipharmack Scents and Fumes, lest the enclosed Malignity, and Infection of the Sick might prove injurious to the Patient, and to them that are by. We must take great care in every Disease,

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that we be not too superstitious in shutting the Windows, and so infect and kill those Patients, who otherwise might have been saved.

f. Barthol.

XI. Let neither the Physician nor the Apothecary declare what their Medicins are, either to the Patient or to them that are by; but let them only signifie that they intend to give a Purge, a Vomit, or a Clyster, and conceal what these are made of: Both because otherwise they may be improperly taken without the advice of a Physician; and because, when things are known, they are contemned, either for that they are ordinary and common things; or for that some Fool in the Profession has condemned them; or for that they are cheap. So *Galen* reports of a certain Rich Man, who slighted good Medicins, because they were sold cheap.

Botallus.

XII. According to the Vulgar Proverb, A desperate Disease must have a desperate Cure: So likewise to unskilful and Rustick Persons, who despise all Method, and hate a multitude of Medicins, such Medicins must be given as remove the cause of the Disease, or the greatest part of it, as much as may be. Otherwise, unless all succeed according to their desire, they run to Quacks and Wizards, and give far more heed to their Saws, than to the best Advice any Physician can give them.

Gabelchor.

XIII. *Hippocrates* bids us observe all the Patients Errors, whether about Meat and Drink, or about Medicins, or External things: For if through their own faults they grow worse, the blame is laid on the Physician; if it happen when any thing has been done towards a Cure, and especially if he have given any ingrateful Potions, or a Purge. For these things are usually lookt on as things of great efficacy. And if after the taking the said things any ill happen, the taking is blamed, though the fault truly lies in the Patient: And in our days this is frequent. Now many Physicians, to avoid this reproach, more valuing their own Reputation than their Patients good, give some insignificant Medicin, or prescribe that which is not worth speaking of: for if they Bleed, they exceed not three or four ounces; if they give a Purge, they exceed not *Manna*, Syrup of Roses, or such things, and they give generally too small a Dose. By which method indeed these Physicians have a care of their own selves, and often endanger their Patients Lives. Neither *Hippocrates* nor Christian Religion puts any Man on this. But they both tell us, that when generous Medicins are given, the Errors of the Sick should carefully be observed.

Martianus.

XIV. Frequent changing of Medicins argues either ignorance or diffidence in the Physician. This may be understood in a twofold sense, either as to Method, or as to Medicins. The first argues precipitance, and that the Physician is out of the way, because he knows not which the way is. But that of the Comedian suits not with the Physician, *Quid si sic tentem, si hac non succedit, alia tendenda est via*, What if I go so to work, if this

way succeed not, I must go try another. Nor are we always tied up to the self same things: for so the Physician may prescribe much, and the Patient take little. But the changing of Medicins, to one and the same end, is both lawful, and argues a Man abounds both in things and words. For as it is a reproach to a Physician always to give the same thing, as if he knew nothing further, and had spent his whole stock, though mean enough, whereupon the Patients run to Empiricks; so every hour to change a Mans mind and his Medicins is equally a disgrace: for he that is every where is no where.

XV. We must always endeavour in the composition of Medicins to avoid a nauseous Treacle-Mixture of divers Simples, which is not necessary; It is useles, uncertain, dangerous and chargeable. Nature, who is content with a little, delights in Simples, and a Disease will sooner be cured by one proper simple Herb than by these prodigious Compositions. *GOD*, says *Helmont*, in *Pharm. ac Dispens. mod. sect. 5.* out of the Providence of his Eternal Goodness and Wisdom has abundantly provided for future necessities: HE made and endowed Simples to answer all Occasions: And by how many more the Compounds in a Medicin are, so less certain will the Compounder find the effect of them to be. Therefore *Zwelferus*, in *appendice ad Animadv.* advises well, To be content with simplicity in the matter of Medicin; and to forbear a needless trouble in amassing so many divers things together; But to practise with one simple, for what *GOD* has appointed it, or but with a few, as poor Country People do, to whom the Chief Physician out of his meer Mercy has revealed most wholesom Medicins, with which they do great things in great Diseases, and sometimes to the shame of Physicians. Hence it was, that the most Learned Physicians of old, *Hippocrates*, *Galen*, and others seldom used the more operose Compositions; but by only one Simple, or by two or three joined together they did wonders.

XVI. We must not use Medicins, but upon urgent necessity; So *Hippocrates*, *l. de vict. Acut.* will not give so much as a Suppository, unless the Body be very Costive: For Medical Helps do but create a trouble to Nature, when there is not a necessity for them.

XVII. In curing of Diseases, and in preservation of Health we must not be always using Remedies, but sometimes rest a while, that is, do nothing but order a good Diet. Thus we must do in the *Crisis*, and after a perfect one, and in the state of the Disease. *Aph. 8. & 20. Sect. 1.* Physicians, says *Livy*, sometimes do more good by doing nothing, than by moving and acting.

Dietericus.

XVIII. Whether a Physician can promote Coction of Humours, and so prevent a *Crisis*, or the stated solution of the Disease, is a Question. In this place it is not my Intention to reject a *Crisis*, and to deny all manner of endeavour to Nature in Diseases, as a *Crisis* is merely the genuine work of Nature, or, as

Vallesius,

Vallesius, 6. *Epid.* 5. expresses it, An extinction of the Disease at once with perturbation and evacuation. But I intend only to reprimand some Practitioners, who to the great damage of the Sick, with a filthy loss of time, do as unhappily as frivolously connive by their delays and their sugared Medicins, feeding the Disease, so that it increaseth. Whereas when Diseases are beginning, if any thing be to be done, we must do it. And so it lies upon the Physician to cure Diseases before a *Crisis*, and without one. Nature makes not a *Crisis*, except when she bears the whole Burthen, on set days. Therefore a true Physician, says *Helmont*, l. de Febr. c. 2. sect. 18. must conquer the Disease before a *Crisis*: If he do otherwise, nothing at all can be ascribed to Medicin. For if a *Crisis*, as the Excellent *Langius* in *Miscellan. Quæst.* 4. argues, must be expected in the cure of Diseases, Physick indeed will be needless, because thus the whole business of the Cure is committed to Nature only, and not to Art or to an Art's Master. Nor does it hinder that there are in our Countries many Solutions of Diseases, and very few *Crises*; for even these solutions of Diseases are made by precipitation and total expurgation of the Morbifick Matter, as of an Exotick Ferment, out of the Mass of Blood, whether this be done manifestly or obscurely. Therefore if the Physician hasten this Cure immediately at the beginning, and leave not the whole business to lie on Nature's shoulders, he will quickly put an end to the Disease. So it is far better to nip a Disease in the bud, than to tarry for a full Harvest: For Example, In burning, Malignant Fevers, what do you think must a Physician do in the beginning or increase? Must he commit the business to Nature, only cooling the Stomach a little with Emulsions and Juleps? Or must he not rather oppose the Disease with a skilful dexterity and contend against it by Specificks, Febrifuges, and Alexipharmacks, (which precipitate the febrile and poysonous Matter) Diaphoreticks, and Diureticks? And when he does this, does he not conquer the Disease before the *Crisis*? For as long as the Fermentation of the Mass of Blood lasts, there is Crudity, and when the Fermentation is gone, Costion comes.

Hofman.

XIX. It is not unbecoming a Physician, who is skilled in the Manual Operation, to breathe a Vein, when there is no Surgeon to do it, or if in his presence the Surgeon mistake; Or if he set a Limb that is broken or out of Joint. For a Surgeons work is one of the three parts of Medicin, from which *Galen* only abstained, when he saw it in the hands of Empiricks and the Vulgar.

Botallus.

XX. He that shews the way of using Medicins, and making them up aright, must be reckoned a knowing and excellent Artist. But he that makes up Medicins only for gain, is not a Physician but a Servant. Now he that makes Medicins not only for this end, but also for others, is not a Servant, nor an Apothecary, but a true Master Workman.

When a Mans Life lies at stake, we may not indeed commit the making up of Medicins to every body: for some Apothecaries are very ignorant, and make very dangerous Medicins: And many more die of them, than by the violence of Diseases, or negligence of Physicians.

Augenius.

XXI. Let him never prescribe two Medicins at once, and leave the Patient to his choice: Because then he is at a loss and can trust neither of them; but blames his Physician for Inconstancy.

A. Castro.

XXII. A Physician ought not always to condemn the Medicins of the common People: *Ἐὰν ἰσχυρὰν ἰσχυρῶν, ἢ ἢ δὴ καὶ ἑυμάρων*, *Hippocrates* gives in charge among other necessary things to Physicians. *Hoeserius* in his *Hercules*, p. m. 77. has rendred it elegantly; Let no Man, says he, be ashamed, if he be never so learned, to learn something, that conduces to the perfection and ornament of his Art, whether it come from an old Woman of fourscore, or from a learned Man, so it be not superstitious.

XXIII. Whereas the Writings of Physicians of old, as also of the Modern, who follow their Dictates, do testify that most of them were very little, if at all conversant in Chymistry, without which no Man can ever comprehend the nature and hidden virtues of Minerals. It is to be lamented, that with this gross Ignorance in many there should be joined so great Arrogance and Pride, yea, Madness, that some have not been ashamed to declare in Writing, that like Cattle they will go the way they are going in, not the way they should go; and that they had rather err with the Ancients, than be in the right with the Moderns, especially with the skilful in Chymistry, and by their guidance cure more successfully: A saying and Opinion certainly unbecoming a Man, more unbecoming a learned Man, and most unbecoming a Christian.

Sylvius de le Boe.

XXIV. Concerning the heaping up of many Simples in the Composition of Medicins, we must observe what *M. de Gradibus*, cap. 1. de *Cephalæa* tells us of *Avicenna's* mind, That of various and many Simples, that are none of them Purgative, a Composition may be made which is purgative; and on the contrary: A convincing Argument, how that oftentimes from an incongruous confusion of Simples and the fermentation of the Medicin, a new form results to such a Composition, quite contrary to the Physicians Intention, and which is worse, to the Patients Health.

XXV. I have spent about forty years in curing of the Sick; and I got little or no help or credit from this sort of occult properties in curing of Diseases. *Galen* also, l. de ren. pass. seems to be of the same Opinion, though at other times he is a great assertor of the said properties. He that will, says he, be a famous Physician, must seldom use Medicins, which help the Sick by an occult Quality. Truly he could not well shew more clearly, how little he trusted to them; and that he used them not, but when the case was desperate,

desperate, because of the violence of the Disease; or when other Medicins which work by manifest qualities, were not able to cure the Disease. I have often, upon *Galen's* Authority, seen Powder of Mans Skull given to Epilepticks: I have ordered Seed and Root of *Pæony* to be hung about the Neck, and yet not till I had first purged or evacuated, and had ordered a proper Diet. But all proved ineffectual, and did no good that we could observe. Sometimes also I had a mind to try, whether Wolf's Dung, tied to the Belly of one in the Colick, or drank, would do good, and a thousand other things, which *Galen* says do operate from a property of their whole Substance; but they did no good. Therefore a certain Physician in our time used facetiously to say in jest, that such properties were deservedly called Occult, Because, *says he*, it seldom happens, that any one finds any effect or benefit from them. Nor are they undeservedly ridiculous in the Eye of grave Physicians, who, while they believe these old Wives fables, do cheat the half dead Patients, and put them out of all hopes of recovery. And this Error, which ought much to be lamented, is not yet fully discovered. For Physicians do still rashly give Medicins of occult qualities, to the ruine of the Patients, out of a desire rather of vain ostentation, than of benefit to the Sick, Because, that they may be thought to know more than others, they do amiss in giving an unusual thing, and of an unknown faculty, to them that are dying.

Puteanus.

XXVI. Obsolete Medicins must not be prescribed. Indeed for many Ages the prime of Medicin was comprehended in Receipts in the Shops, which they only and always used, trusting more to their Masters than to themselves, whereby there was no Accession made to Physick. Therefore many things are deservedly grown obsolete. This *Augæa's* Stale must be cleansed. This holds good in most Simples, simple credulity and transcribing being exposed by Botanists to the publick. I dare say, not the hundredth *Encomium* has been confirmed by Experience. The case is the same in unusual things, both old and new. Therefore as we must not raise from the Grave, as it were, the opinions and secrets of Monks, and rely on them; so we must not boast of Singularities, such as the best Apothecaries Shops know not. Doubtful things are prescribed, as Opiates in a Pleurisy in the beginning, strong Purges or Vomits in Consumptions, *Trochisci de Auripigmento* for a Fume in these Diseases, *Electuarium de Arsenico* in *Asthma's*: So other things may fall under this denomination, Mercurials and Arsenicals, and the generous Cures that we read of by them, must either be understood with grains of allowance, or must not be easily imitated. Things also that have never been tried, must not easily, nor without great reason be experimented in a Patient. Medicins may be said to be doubtful on a twofold account, either of the preparation: (Wherefore in well ordered Shops they write

in what year, and how such and such Medicins were made;) or of their Effect.

Wedelius.

XXVII. A Physician must not mix those things which destroy one another by manifest contrariety. Two things in particular do give instances of this thing, in which notwithstanding an error may easily be committed: For Example, Vitriolated things must not be mixt with Nitrous ones, neither in a liquid nor in a solid form. For, as in the first case there arises *Aqua fortis*, so in the later the same smell arises: And this must especially be observed in Compounds, that we mix not Vitriol of Mars with *Nitrum Vitriolatum*: for it is the same thing as if they were in another form. So aluminous things must not be joined with Alkalies, a fault that may easily be committed in Fever Powders. We must therefore have a care that when Magistery of Alume is an Ingredient, we put not in Salt of Wormwood or any such thing.

Idem.

XXVIII. Some do counterfeit Diseases, whose deceit it belongs to a prudent Physician to detect. Slaves counterfeit Sickness, that they may not do what is enjoined them by their Masters; Prisoners, to avoid or defer the bitterness of a Prison or Torture; Soldiers and Seamen, to avoid the danger of some Expedition or Voyage; Pettish Women, to make their Husbands love them.

In the year 1588, when the great Armado was sitting out at *Lisbon* against *England*, a Whore, who had inveigled some Men of Note, who had Wives, to her Bed, and was to be banished for it, counterfeited a Miscarriage by scattering a mixture of Milk and Blood all over her Bed, and she desired a Testimony of the thing; but could obtain none from me.

Galen relates in a Book upon this subject, how one feigned himself in a Colick, whom he found out both by his way of living, which was not apt to breed a Colick, and by a cunning peculiar to himself.

Now the Diseases that are counterfeited, are usually Swooning, Apoplexy, Fits of the Mother. Thus some ty their Arms so strait, that the Pulse can scarce, if at all, be felt. When they are called on aloud, they do not answer: If they be prickt a little, or their Ears pulled, or their Fingers bent, they bear it patiently. The Cheat is discovered by asking, whether any want of Food has preceded, whether any loss of Blood, whether a Looseness, Vomiting, or immoderate Sweating, or any Disease, or whether he has been in a hot place, or one of an ill quality, as if there be Coals half kindled in a close Room; or if some pusillanimous Man be put into some great passion. And lest the Physician should be cheated by some false Servants, let him see that the Arms be not tied. But if the extrem parts be cold, and if a cold Sweat burst out, especially about the Head, Face, and Neck; if the Pulse be insensible and formicating; if the Breathing be little and cold; if the colour in the Face be gone; if he void his Excrements; these things signify that the Diseases are not feigned.

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ed. But if there be no such signs, that the Physician may find out the Cheat more certainly while the Cheater lies as if he were asleep with his Eyes shut, so that he looks as if he were in a Swoon, he must mention and make ready some strong Medicines, he must order Burning, bending of the Fingers, and pricking of the Body with Needles: For by these means you will find whether a Man is really sick or counterfeits.

Some know how to raise Swellings, Blisters, and Ulcers, as by washing the Skin with juice of Spurge, or with a decoction of Spanish Flies or Wasps in Water: Or by applying scorching Fennel, or Turbith, or Poudre of Yew, which is usual with Beggars. The deceit is discovered; because Blisters and Swellings, caused by Application, are easily cured only by applying cooling things, as juice of Poplar or *Unguentum Populeon*, to the sore. It happens otherwise, if Swellings arise of themselves, because they do grow worse by Coolers. Cunning Women also use to pretend they are with Child; But it is known to be counterfeited, because the Belly is lax and unequal. Some counterfeit Madneſs, whom you may know by their Habit, and want of signs of Madneſs or Melancholy. By which way the *Greeks* by throwing *Telemachus* the Son before the Plow, when *Ulyſſes* the Father had passed him by and lifted the Plow over him, they knew thereby he was not Mad. Some with the Steam of Brimstone or with some such thing discolour their Face. Saffron or Rheubarb tinges the Urine; they wash with this, and so counterfeit a Jaundice: But when the Face is washed, and more of their Water is looked on, the deceit is discovered.

But whoever do counterfeit Pain, may easily be caught at their fiction, because they bear it better. For they that are in misery indeed, being disturbed by the violence of the Pain, do put themselves first in one posture, then in another, which they that counterfeit do not observe. Besides, they that are very ill of a Disease are willing to admit of any Remedy, voluntarily send for Physicians, and do whatever they prescribe. But if they be but a little or not at all sick, they refuse such Remedies. Therefore the Physician would do well to add this, that such things do no good but only to such as are very ill. Sometimes also it happens, that a wounded Man, either out of hatred of him that wounded him, or to get some Money out of him, feigns that some Limb is hurt. You must touch the Hand or that Limb unawares; or apply a Plaster with promise of certain hopes of a Cure. Thus many use to impose on ordinary Physicians, to their discredit. Some that have been condemned to the Gallies, have counterfeited hurts in their Arms, and some unwary Surgeons have confirmed the same, for which they have been sued afterwards; because the contrary plainly appeared.

In the year 1664, I was called to *Coudetum* a Village of *Vallis Transversæ* about seven hours

distance from *Newenburgh* in *Switzerland*; it was to a Woman, who was struck on the Arm with a Staff, or rather a small Rod by a Neighbour of hers an Honest Man, who had been often provoked by her ill Tongue. She took the injury so heinously, that, because she could not be revenged, she took her Bed, designing to starve her self to death, to the end that he being guilty of her Murther, might suffer death for it. She had been three days without Meat, and could put her self into Fits when she pleased. He doubting her safety called me. I found the old Woman in her Bed, lying in an Hysterick Fit, pale because of her fasting, but of a constant and orderly Pulse. There was no mark of any blow upon the Arm that was struck, nor any swelling. I held Matches of Brimstone to her Nose, the steam whereof she bore patiently: then I suffered the end of her Nostrils to be singed with the Flame. She being desirous to know who it was that used her so, opened her Eye-lids a little, and shewed the Whites of her Eyes, and shut them again immediately. I bid the Surgeon with a loud Voice to heat the Fire-fork red hot, and apply it so to the Soles of her Feet. She being scared with the Fire awoke with a little yawning and stretching, and then she asked me, why I would be so injurious to an innocent person? I told her I used things to bring to life again, such as were so dead. It made good sport, and joyed the Aggressor not a little, who having received a Testimony of me of the wickedness of the Woman, dismissed me, and waited on me to the City.

XXIX. Many take wrong Advice of Physicians, counterfeiting the Headach, Burning in the Night, or some such thing, when there is no such thing, but Ulcers in their Privities, which they are foolishly afraid to confess, desiring only to get a Purge or Bleeding from the Physician, hoping by that Remedy alone to obtain health, without taking care of the part affected. But within one Month or two most of them find, they have not so much deceived their Physicians, as cheated themselves. Some burn with Lust; Others with Anger; Secret Fear grieves some; A silent Care others: All which things are the fountains and causes of Diseases, unknown to a Physician unless they be told him; which if the Patient may not discover, it is not fitting in the least to dissemble his grief of Mind in general: For the Physician perhaps will abstain from many things, and prefer others, when he finds an afflicted mind, which he would not do, were he to contend only with what of the Disease he finds apparent. I had a Patient under cure once, who complained of a violent pain in his Breast, and a Fever; yet no Fever appeared; the discovery of the Pain depended on the Relation of the Patient: He complained constantly, sighed, and had no sleep: He continued four days in this anxiety: About two of the Clock in the Afternoon of the fourth day, a Crisis of his secret Disease did unexpectedly break out in my presence; which cured the Man: For a

Servant

Botallus.

Servant of the Patients came in from *Lions*, who told him he had got the Cause in a Suit at Law, which the Patient expected with Impatience. Behold, says he, the cure of my Disease, now I find my self well: for this doubtful Expectation tossed my mind every way. And so he had no need of a Physician afterwards.

XXX. *Hippocrates*, 6. *Epid.* 7. bids, *When there is need, raise the Timorous from their Beds, and by change excite the Torpid to such things as they act slowly.* Which Rule though it seem but slight, is sometimes of great moment; that the Faculties may not grow torpid, and the Patients be much weakened: for some Diseases are of a hard *Crisis*, the solution whereof if you should expect before the Patient did rise, he would grow faint, the Faculties would forget their office, and he would die. And thus we must often force the sick to rise from their Bed, though not perfectly cured, and excite the Torpid to such things as they act slowly; that is, we must put them on doing things, though they be slow and dull, and do them but slowly and lazily: For by degrees they will lay aside their idleness, their faculties will revive, and so by degrees they will conquer their Diseases, which Diseases would never have been conquered by them, while they lay in Bed, only thinking of their own Misery. This Rule holds good in Chronical Diseases, and in Relapses after Acute ones.

Vallesius, com. in loc.

¶ I will give you an Example of the benefit of this Rule. *Anno 1670.* Mr. *Theodore Jacomote* of *Geneva*, seventy years old, was taken with a Disease, which confined him to his Bed for four Months: All the Functions both of his Body and Mind were brisk, if he could but have walked. His Wife being tired with the tediousness of it, sent him in a Waggon into the Country. Within three days strength returned to his Feet, and now, considering his years, he lives well in health. The jogging of the Waggon shook off the Numbness from his Feet, and kindled the innate heat that was buried, the change of Air and place concurring with it.

XXXI. When a Physician is first called to a Patient, after he has put the Patient in hopes of a Recovery, let him order something besides Diet presently, that he may not be thought to practise Physick by Books: Especially when he is called after other Physicians: For then all do expect something more than others have done before you. Therefore when you are informed what they have done before, betake your self to some other sort of Remedy, yet such as you think is more effectual; lest, if you should repeat the same things, they should think you were called to no purpose. If the Disease be acute, you must think of Bleeding, Purging, Cupping, &c. If Chronical, of Bathing, Sweating, use of Steel; or of Stupefiers, if Pains or Fluxions, or much want of Sleep do trouble a Man. But if the Disease be of such a sort, as may be cured by Diet alone, when it is ordered, you must prescribe some Physick, which may do no hurt; and which in

stead of Diet may be able to do much good; lest they should call you ignorant, and maintain that Nature cured the Disease; because you knew not how to do it. And this must be done especially, when the Patient is one of them, who is always tampering in Physick. For some are so solicitous about their Health, that unless they take Physick often, they think they shall die. And the Vulgar do not attribute the Cure by Diet to the Physician, but to Nature or to the Cook, whereas the Prudence of a Physician is in nothing more illustrious. Nor yet do they please me, who for lucre's sake, are always prescribing something: For this ought to be a Rule, if the Sick can be cured as well without Medicines as with them, that we always abstain from them, especially from such as may move or alter; both to save Charges, and that Nature may not be weakened: and finally, because many things, when moved do harm, which unmoved would do none.

A Castro.

XXXII. A Physician should not come near the Sick, unless he be sent for. This Rule must ever be observed: For if he visits a Patient unaskt, 1. He renders himself suspected either of Ambition or Covetousness: for Men attribute the Visit to one of these, not to good will. 2. You cannot be certain of the Confidence, which *Hippocrates*, 2. *Prognostic.* 3. says a Patient ought to have in his Physician. 3. The Patient is not obliged to Reward him, since his pleasure does not appear to the Physician, whether he was willing to have this service done him, by a Man, who has tacitly declared, that he is well satisfied, if the Patient will accept of his visit. 4. The Patient was either his Acquaintance or not. If he was your Acquaintance and sent not for you, he therefore did it, because your Pains was not acceptable. If no Acquaintance, your visit is improper, for if any thing happen but well, you will not want suspicion. 5. Your Visit perhaps will grieve the Patient, when he holds himself obliged to Fee you, though he did not call you: For some Patients are so covetous and fardid, that they neglect all the means of Physick for fear of their Money.

Idem.

XXXIII. Visits to Patients must not be too frequent nor too few. For too frequent visiting, where the Disease is but gentle, does argue either want of skill in a Physician, or Covetousness in extorting of Money. And too spare visiting in great Diseases does argue the same things and more than the frequency; namely either Covetousness, or ignorance of the greatness of the Disease, or Idleness. But if there be none of these things in the case, when we know that Mens Bodies and Diseases suffer various motions in one day, it may so happen, that you may visit a Patient when he is at the best; or when he is at worst; or in a middle state: No one of these apart does indicate what we should do, or what we may expect: Therefore the Prognostick is uncertain, and the Remedies also are uncertain. Those that are by indeed may relate many things to the Physician, but they may not mention many things, which would indicate

cate something to a Physician, for the Cure or Prognostick. But then Physicians are to blame in this frequency of visits, when they are never idle about the Patient, but always prescribing something. Thus while they would be thought officious, they do much mischief.

Borellus.

XXXIV. It is the Physicians Office not only to use Remedies but also to remove all Impediments. And all Passions of the mind are great Impediments; but especially the sick Mans Impatience, who desires that the Cure may be hastened. The Physician must therefore prevent this mischief by comforting and exhorting the Patient, to make no more haste than good speed, and to wait Nature's time. This rash and impatient thinking in sick People hinders the Cure. For while they despond because of their sense of Pain, they make their Disease worse by their very timorousness, and when they could not be conquered by the violence of the Disease, they are killed by their disturbance of Mind. And here the encouragement of the Physician does good, if he propose to the Patient that Nature is not changed but maintained by Art: and hence he will reap more benefit from his confidence, than damage from his diffidence: for the more desirous the Patient is to live, so much more easily will he be persuaded by the weakest Arguments to obey the Rules of Art, and to hope for his Health in a little time. The Physician moreover must tell him, that Health, which he endeavours to introduce, is familiar to Nature; and therefore, if he will but follow Advice, that it may be introduced without much difficulty: That he was not born with the Disease, and therefore since it is not rooted in Nature, it may the more easily be conquered.

Zwingerus.

XXXV. *Plato primo de Legibus* shews, that it is the duty of an ingenuous Physician to instruct his Patient, and not to order him, what must be done, till by informing he hath persuaded him, that it is expedient to be done. And though for this very reason Empiricks find fault with the Dogmatists (as *g. de legibus*) because a Man ought not to teach but cure his Patient. Yet they do not teach him to make him only more knowing, but upon another account, that when he does know, he may the more willingly obey. *Aristotle's* saying to a Physician is memorable: For when the Physician was ordering him what should be done, *I will willingly obey you*, says he, *but it must be in a Philosophical way, that is, if you make me not only believe, but demonstratively know, that what you say is true.*

Idem.

XXXVI. There are ten principal things concerning which Patients should be interrogated, according to *Hippocrates*, *l. de Affect.* and *Galen*, *4. de san. tuend. c. 4.* 1. What it is that ails him, and how his Head and Stomach, and other principal parts do? 2. How many days he has been ill? 3. What made him ill? 4. What Diet he kept? 5. Whether he be Loose or Costive? 6. Whether the Disease be Phlegmatick, or Cholerick, or both? 7. Whether the Disease be but be-

ginning, or in the increase? 8. Whether he use naturally to breed bad Humours? 9. Whether any Natural Evacuation be stopt? 10. Whether his Body be laborious or idle? All these Questions are so necessary to be asked by a Physician, for the Patients Health, and for the exact Knowledge and Cure of Diseases, that without asking of them a Man will scarce ever cure aright.

Ferdinand.

XXXVII. Physicians must know not only Men's Nature in general, but every Man's in particular, (the *Greeks* call it *idiosyncrasia*) and he that knows this, he may truly cure; for he is got into Nature's Closet. ¶ But this can only be obtained by Experience and singular Observation.

Tulpius.

Sylvius de le Boe.

XXXVIII. And the Physician must be admonished of this one thing further, that when he observes any thing singular in his Patients after eating this or the other Meat, that then he must diligently search and enquire the true causes of that Symptom, to the end, that when they are as exactly enquired into, as is possible, he may cure those Ails with more ease and success: For nothing recommends a Physician to a Patient so much, as the finding out of a hidden Cause, and the Artificial Cure of it, which other Physicians could not arrive at. Now when Practitioners meet with stubborn Diseases, and being taught only by Books, can find no Examples of them in Physical Authors, nor have learned how to discover the causes of them, they are at a loss, and the Patient cannot be cured, till some are called that are well exercised in the search of Arduous things, who may by their skill find them; and oftentimes they do not only successfully, but easily cure Patients, who were reckoned incurable; which, how much it must conduce to get a Physician Reputation, any one may imagine.

Idem.

XXXIX. Empiricks and all the Vulgar use comparison in Diseases, and use the like Remedies for Diseases, which they think alike. This thing hugely pleases the unskilful; for because they know few differences of Diseases, they think what are not manifestly different, must be altogether the same. But good Physicians do not so; for similitudes are much suspected by them, as they do easily impose and occasion doubting: And though at first like Diseases might be thought to be cured with like Remedies; yet they know, that many Diseases, which are very like in appearance, require contrary Cures, because they come from contrary Causes. The knowledge therefore of the Cause produces the contrary, that is, takes away all mistakes, and doubtings; As if several Men be ill of the Colick, one by drinking of cold Water, another with Wind, another with Bile; an Empirick seeing the same Disease, would use the same Cure to them all: But a Rational Physician, who finds the Causes are contrary, will give contrary things. Therefore he proceeds ill, who only considers similitudes; but well, who finds out the Cause. The knowledge of the Cause is so useful, that oftentimes the ignorance of the Cause does more

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mischief, than the ignorance of the kind of the Disease, and of the place affected. For he is less able to undertake the Cure, who knows not whether the Colick comes from a hot or a cold Cause, than he that knows not whether it is the Stone or the Colick. And it is of more moment towards the cure of Fevers to know what kind the Humour is of which comes out, than the manner of its Fit, &c. Therefore, to know the way or method, wherein every Disease must be cured, it is of great moment, it concerns a Man to begin with finding out the Cure. Now it is hard, by Ratiocination to know the ways, that is, to invent Methods, because it is hard to find out, what the Disease is, what the cause, what the part affected, and what every Mans Nature and Custom is, and all these have their particular Indications, or Insinuations what to do, which we must consider separately, and then compare them one amongst another, subtracting the contrary and less, from the contrary and greater, more or less, as every Indication is stronger or weaker: From hence all Cure arises.

Vallesius.

XL. I make no question, but a Physician ought plainly to foretel the Patient of his Death, when he desires to know the Event of his Disease. For there are both Political and Theological Reasons, for which I think it good that the Patient should know the event of his Disease: And a Physician has no reason, to deceive his Patient, especially when he is sincere, and willing to know the truth.

Sennertus.

XLI. Patients must not always be severely denied what Nature earnestly craves. For we see that several do not recover of a Quarantine, and of other Chronical Diseases, till their Appetite is gratified. A Woman had a Malignant Ulcer about her Throat, it put her to much trouble, to swallow either Meat or Drink: Though she was not with Child, she longed for several things, as for Herrings, Flesh and Fish salted and dried in the Smoak, and other Meats hard of concoction, which though they were hard, she swallowed without any difficulty. Her Stomach loathed Emulsions of Almonds, Barly-Broth, and Flesh-Broth, and she would fast sometimes for three days, till her vitious Appetite came to her. Moreover, though what she craved was contrary to her Disease, it did her no harm: And what she loathed, though proper, it would make her reach and a little feverish.

Hildanus.

XLII. Seeing one Disease sometimes follows another as its Remedy, whether must we expect it from Nature, or procure it by Art? *Celsus, lib. 5. c. 28. scilicet. 4.* intimates that by no means it should be procured, when he writes that a Fever coming upon a *St. Antonies* Fire for one day, was a fortuitous Medicine, which consumed the Noxious Humour; In which thing he seems to follow *Hippocrates*, who discoursing of this changing of Diseases, said, *lib. 1. de morbis*, that such things came not by the skill or ignorance of the Physician, but spontaneously, and by fortuitous success. Yet because Art imitates Nature, therefore what Nature does, that also ought to be done

by the Physician. From Her moving Sweat, purging by Stool or Hemorrhoids, and doing any such thing, while she observes a due Decorum, the Physician learned to practise Physick. Wherefore in this difficulty we must say a Succession of Diseases must be procured by the Physician, that the former Disease may be removed. Therefore *Hippocrates*, *6. Aph. 15.* says, that a Vomit coming upon a long Looseness cures the Disease: Where *Galen* says, This is one Example of those things that are well done by Nature, which the Physician ought to imitate. But if it be so, why does *Celsus* call a Fever, which cures a *St. Antonies* Fire, a fortuitous Medicine, and why does *Hippocrates* write, that such things are done with fortuitous success? I answer, It is, because it is so dangerous a thing to raise a Fever; For if it happen upon a Cacochymick Body, it is in danger of being Malignant: if in a pure Body, that it may corrupt the Humours, or turn to a Hectick. Therefore we must proceed with great caution, and rather use such a Remedy fortuitous, than procured by Art: For a Fever supervening on an Apoplexy proved destructive to *Numenius* his Son.

Rubeus in Celsium.

XLIII. A Medical Sleep is a Sleep of the Diseases of Mind and Body, either spontaneous or procured by Art. For Artificial Sleep gains a Physician a great deal of credit. *G. Palm*, a Physician formerly of *Nuremberg*, knew that very well, who, they say, used to tell his Patients, that he would do them that favour, that they should rest better the night after he was called. He obtained this with Syrup of red Popy, which he prescribed that Night. I was taken with the Stratagem, and I often do my Patients the same kindness, by giving them my *Magisterium Anodynum*.

Rolsincius.

XLIV. It is not once, that I have seen Braggadocio's and Vainglorious Physicians mistaken, while some of them would disparage what their Collegues had said, and would boldly determine, that some Spots or Heat would certainly prove the small Pox or Measles, of which others were dubious. But it is better, in a doubtful case either to suspend ones Judgment, or only to answer dubiously, than rashly and without any certitude or solid conjecture, to pronounce such things in any case, as frequently fall out otherwise, and then expose poor *Suffenus* to be ridiculed by the Vulgar, who by mean tricks was aspiring to his imaginary Primacy. ¶ Certainly a Man had need of long and careful Experience, positively to determine the Disease it self, and its event.

Sylvius de le Boe.

Idem.

XLV. Whether should he make an Harangue to the By-standers, that is, may he dispute of Diseases before the Vulgar and Idiots? In general, Harangueing is unbecoming a Physician: for it gives the Patient a suspicion that the Physician would cure indeed, but that he is not able, and therefore he would supply in talk what he cannot perform by his skill. Truly to the Art of Physick (which is splendid enough of it self, when the Physician be-
haves

haves himself as he ought) there is no necessity of Starcht Discourse, which may take a great deal of pains in the History of Diseases before Fools. For Diseases are not cured by Discourse but Medicins. Therefore what *Ajax* said of himself may hold good here.

Melior sit dextera linguâ.

Zwingerus.

Hildanus.

you sowed, and I reap.

XLVII. Now I lay open a great Mystery of Nature. Transplantation of Diseases is a stupendous Remedy, whereby the Sickness of this or the other Man is transplanted, either into a Brute Creature, or into another Man, or into something inanimate. The Cure indeed seems superstitious to many. But since Natural Means are used, without the concurrence of any superstition, in Words, Characters, or Gestures, though the weak understanding of Mortals cannot always comprehend the reason of it, I dare not condemn what several have tried by Experience. In Sacred Writ I observe some hint of this Transplantation, though miraculous, concerning the Lamb in *Moses*, and the Swine in the Gospel. The chief way of Transplantation of Diseases is into Brute Creatures. Some Cure Consumptive Persons by letting them Blood in the Arm and giving the Blood to a Cock. One *Flud* an *Englishman* is reported to have transplanted a certain Mans Gout

T. Barthol.

Langius,

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to many, if he must be at Consultations with other Physicians: for Consultations require time and Medical Study. Therefore if many be to be cured none can be lookt after, as they ought; and therefore many die.

A Castro.

L. Let not a Physician be ashamed to confess his Errors, imitating *Hippocrates*, who says, he was deceived by the Sutures, this is after the manner of Great Men, who have hopes of great things: for some Mens Spirits, because they have nothing, detract nothing from themselves. It is agreeable to a great Spirit, and one who nevertheless will do great things, to make a simple and true acknowledgment of his mistake, and especially in that Ministry, which is delivered to posterity for their profit.

Celsus.

LI. Experience is useful to Methodical or Dogmatical Physicians; because from this historical and particular Experience of Empiricks, they take an occasion of finding out a general Reason of those things that are unknown. *Hippocrates*, lib. de Præcept. has said, that a Physician ought to learn of Idiots: for these are endued with sense as well as the most learned Physician; and the Rudiments of Physick were found out by the benefit of Sense. Empiricism is useful to the Sick: for, be the Empiricks never so unskilful, because they want the knowledge of Præcepts; yet, I exhort Dogmatical Physicians, according to *Hippocrates* his Advice, lib. de Præcept. that for the Patients safety, in difficult Diseases they would not neglect the *reish*, that is, the Experience of Empiricks: For though they have not a Dogmatical Method, drawn from Histories of particulars, yet they have Experience in particulars, and sometimes cure Diseases by Empirical Analogism, though they cannot render a Reason of their Cure by a Methodical or Dogmatical Epilogism. Certainly a mere Empirick, even upon the Testimony of *Aristotle* is better than a mere Dogmatist; because he cures some, though without Art; this never cures any.

Zwingerus.

LII. There are many things in this Art, wherein for Urgency's sake, it is a piece of Art to depart from Art. For though there be many Legitimate and Regular Precepts; yet none are perpetual: And he that reckons any for perpetual and inviolable, may be a Methodist, but not at all Rational. For a Rational Physician cures not by Book or Commentary, but as Experienced Reason dictates in every affair, and he ties himself to no unalterable Rules. Nothing is more unprofitable and dangerous, than always to observe the same set form, which the less Circumspect, and they that are ignorant in many things, call Method, which yet is method only in this, that it is a short way, but it is too short. Art cannot be confined within so narrow bounds; there is need of Reason to consider all things; for in Cases there is a wonderful variety.

Vallesius.

LIII. It is the part of a Physician not only to use Medicines and all Medicinal Instruments aright, and to order the Meat and Drink; but also to take care of all things that must

be done or said before the Patient, by himself or by any body else, and of the Chamber, Houle, and Bed, and of all External things, and to dispose of them all, as may make most to please and benefit the Patient. *Hippocrates* calls this Providence, *the Oeconomy about a sick Person*, properly enough: For when he orders Bleeding, or Purging, or the applying of a Plaster, or any such thing, he seems to exercise his Art of Physick: But when he orders the Windows or Doors to be opened, or shut, the Patients Bed to be removed this way or that, that they who come to see him talk of such or such things, that this be told him, and the other thing be concealed from him, he seems to exercise a kind of Oeconomy. And indeed though the first care, which belongs to the Medicinal Instruments, be of most moment, yet the last is of no small concernment. Certainly many excellent Physicians, and well skilled in their Art, because they are a little awkward about this Oeconomy, are so ingrateful to their Patients, that for this very reason they are laid aside as useless. On the contrary, others that have little skill, do so accommodate themselves to this Care, that though they do no great feats, yet many think them excellent Physicians.

Vallesius.

LIV. The Physician must not visit his Patient beyond the twentieth day, if he recover; unless he be intreated to assist him in his Recovery. So when he has a mind to take leave, he must cunningly enquire, whether there be any thing, that still requires his coming; for it does not become a prudent and grave Physician to tarry till he is bid to come no more.

A Castro.

LV. Many Physicians avoid all days of the Conjunctions and Oppositions of the Moon: Some to this Superstition do add many other unhappy Aspects. And it is plain, that all of them will not begin a Cure on those days, and that they make an intermission of the Cure on them, if they have begun it. *Hippocrates* indeed condemns fifty days about the Dogdays, and twenty about each Solstice and Equinox, ten before and so many after, and the rising and setting of the *Pleiades* and *Arcturus*, l. de Med. Purg. and l. de Aer. Aq. & Loc. I think it more Medical and prudent Advice, to have a care of the great and various Intemperature of the Seasons, laying aside all care of the Stars. Nor indeed can I think that those Physicians named the Stars upon any other account, than as they are signs of the Alteration of Seasons. The Dog of great heat, *Arcturus* and the *Pleiades*, and the four Points of the Zodiack, of sudden Alterations. A Physician therefore may observe the Alterations of the Air, and reckon they only belong to his Art. I only regard these Aspects of the Moon, when it makes not much matter whether you give or defer your Remedy: Complying so far with other Mens opinions, as to call it the Least Indication.

Vallesius.

LVI. It is found by Experience that every seven or nine years a Man undergoes some great alteration. These years are called Climacterick, because they are Steps or Ladders by

by which we climb up to old Age. In these years *Gravus in Horstius, tom. 2. p. 492.* dissuades the use of great Medicines, or as *Mermannus* calls it, the *Therapia Magna*. For, as wise Physicians do nothing on Critical Days, but leave Nature to her self: So in these years, since Nature for the most part uses to do some great thing, the Physician must be quiet.

Hæserus.

LVII. Whether are there any Universal Medicines, as is written of *Butler's Stone* (See *Fr. Hofmanni A. Pharm. l. 2. c. 65.*) which cured most, if not all Diseases with a touch of the Tongue only, using a few more Circumstances? We do not deny *Helmont's* Opinion, that Scents have an immediate contact with the Spirits, and can do much in exciting the *Archeus*. But whether by this very illinition with such a Stone of *Ens Veneris*, &c. the *Archeus* can be so strengthened as to avert all occasional Causes, is a great *Postulatum*, and can hardly be granted.

Wedelius.

LVIII. Whenever the Physician judges some generous Remedy requisite, and the Patient or By-standers are against it; he ought to shew the great danger present, the mischief of deferring or omitting it, and then impute all the damage that will follow, to their refusal. Thus they that will not yield to persuasions, will obey for fear of future evil. Now the Physician that neglects this Rule does not only neglect his Patients but himself; His Patients, because when they flinch for a little pain or trouble, he does not threaten them with the danger, and so force them in a manner to obedience: He neglects himself, because when things go ill, all the blame devolves on him; and he is accused of want of skill, as not foreseeing the mischief that would follow; or of negligence, in not reducing the Patient to his Duty with greater heat and earnestness, who is excusable, for the pain he was to undergo.

Sylvius de le Boc.

LIX. I have often thought with my self, that we cannot make too little haste in driving away of Diseases; but that we must proceed slowly, and that more should be left to Nature than is now the custom to do. For he is in a Mistake, and that no very learned one, who thinks Nature always needs the help of Art. For if it were so, she had not taken that care of Human kind, which the conservation of the *Species* requires; Since there is no proportion between the frequency of Diseases that invade Men, and the faculties, which Men have, to drive them away, even in those Ages when Physick flourished most, and when most Men practised it. What this will do in other Diseases, I know not, this I know very well from the concurrence of diligent observation, that in the Fever, whereih the *Stupor* prevailed, after general Evacuations were used, Bleeding, and Clysters, the said Symptom used only to be cured by Time.

Sydenham.

LX. Where the nature of the Disease is obscure, yet as for the Cure, an Indication is left us to be taken from the *Juvantia* and *Leidentia*, by means whereof, trying the way by degrees, we may conduct the Patient out of

danger; provided, we make not too much haste; than which haste, I think nothing more destructive, nor that more Patients die of any one thing. For I am not ashamed to confess, that when I was not satisfied what I ought to do, I provided best both for my Patient and my self by doing nothing: For while I waited my opportunity to kill the Disease, the Fever either went away by degrees of it self, or put on such a Type, that then I knew well enough, with what Weapons to conquer it. But, which is to be lamented, most Patients not fully knowing that it is as much the part of a skilful Physician sometimes to do nothing at all, as at another time to give the most effectual Remedy, are not capable of the benefit of this honesty and faithfulness, but impute it either to negligence or ignorance, whereas the dullest Empirick, knows well enough how to give Medicin upon Medicin, and usually does it more than the Wisest Physician.

Sylvius de le Boc.

LXI. I had rather make use of an Empirical Physician, that is, one who practises according to Experience, than a Theoretical one, who practises according to his Reasonings and Figments. For Experience has long since informed all Accurate Observers of things which happen in our Art, that Empiricks are more successful in their practice than Theorists, and such as are Physicians from Books, or their own Speculations; Men so much more miserable in their folly, because they make others miserable with themselves. But the World will be bubbled with Cramp Words, and great Brags.

Idem.

LXII. As in the knowledge of all Arts Reason and Experience are very necessary; so in Method one cannot be without the other. Reason indicates, what must be done; Experience confirms, what Reason has invented, and teaches to work exactly according to Art. Yet all things are not found either by Experience alone, or by Reason alone. *Gal. 3. m. m. 1.* Although Reason alone, invents some things, and Experience alone produces others, yet always, as much as possible, Experience and Reason must be joined, as two Crutches on which Physick leans: So that in Theoremes, or in Medicines found out by Reason, Experience must follow; on the Contrary, in such things as were found out by Experience, Reason must come behind, *2. Meth. cap. 6.* Let them be so connected and fastened one in another, that one may strengthen the other. For no Reason can be true, which is contradicted by Experience, nor on the contrary; That is, they must both be true, and the things that are found out by them; But when they thwart one the other, of necessity either the Experience must have been inartificial, or the opposite Reason must only be apparently true, whereon we must not rely, nor for it must we depart from our Senses and Experience. And therefore there is no Reason without Experience; both Experience without Reason is invalid, and Reason without it is fallacious and captious: Though the Preheminence between them two

is doubtful. For Experience knows few Diseases, and those which come often and frequently: But Reason does as well help rare Diseases, which it never saw before, as common ones, because it searches out the Natures, Differences, and Causes of all by Discourse and Ratiocination, or it comprehends things by Scientific Knowledge, or at least by Artificial Conjecture, yet by a sure one, and that which is next to Science. Besides, Experience only acquires those things which often happen in the same manner; and seeing all the simple and compound Diseases of all parts, Similar and Organick, cannot be brought together, it is impossible that there can be Experience of them all, but only of the frequent ones; and therefore it of itself does not comprehend or reach either the knowledge or Cure of several Diseases. Besides, some frequent Diseases come without any concurrence of Symptoms, and cannot be known, but by conjecture and a Tentative Cure, and therefore in this way of proceeding only Reason can obtain the knowledge which is sought after; And Experience not knowing the power of the trying Remedy, joyns and compares it with the following operation, and thence it easily guesses, and it gets as much knowledge of the Disease by things hurtful, and orders the whole Cure: But not that Experience, which knowing not the virtues of Remedies, takes any thing for the Cure without judgment, so that if the business succeed not at first, he knows not whither he must go, but by blind Chance and Fortune runs to another thing. But however it is, that Reason dictates these and the like things to us; yet Experience is very necessary, as in order of Nature it deservedly goes before Reason, since Physick was not found after Reason, but Reason after Physick. Though Reason will not yield to Experience in dignity; yet in the mean time lest Reason should halt, let a Man stand on Experience, which is the other Leg, and this is often of it self sufficient. For what things, says *Sennertus*, *Inst. lib. 5. p. 1. c. 22.* fall under our sense, leave nothing in doubt, nothing in question; but since some things are hidden to the senses, we must endeavour to bring them under Reason; yet so as not to infer confused and infinite things, nor fetch the principles of our demonstrations from far. And when what is found by Experience, can be proved by Reason, without doubt it is very certain. But when Reason opposes, we must rather adhere to Experience, yet this must be of a skilful Physician, sure and undoubted; for if it be uncertain and bad, it tends to the destruction of the whole Man; Wherefore *Hippocrates* said, *6. Epid. 2. 29. A Physician must experience nothing rashly.*

Hofman.

LXIII. Seeing *Hippocrates*, in reckoning up the Critical Days in Diseases, followed the common custom, calling all that time, from which the Patient began to be sick till Sun-setting, the first day, and taking the other following to begin at the rising, and end at the setting of the Sun, we ought not to depart from his way of Computation. For though *Galen* make every day to consist of about

twenty four hours, he was neither taught it by his Master, nor did he it, as convinced by Experience; but because he could no way else assign a Reason of Critical Days. But because this way of Computation taken from *Galen* is commonly observed; that this Abuse in a thing of so great moment may (if possible) be removed from the Medical Faculty, I shall dwell a while upon this subject.

First therefore I shall shew, that this Computation of *Galen's* is not according to the mind of *Hippocrates*, who used to commence every day, expecting the first from the Sun-rising. Then I shall try to give the true Reason of *Hippocrates* his Computation, and assign a cause, why the first day, though it be not a whole one, yet ought to be reckoned for one day.

Let us therefore fall upon the first. If *Hippocrates* had had a mind that the enumeration of each day should have been made, by beginning the day always from the hour when the Patient fell sick, he must needs have told the hour when the Disease first took the Patient, seeing the whole course of the Computation has its original from thence. But in reporting the Histories of Patients he nowhere makes mention of the hour of the invasion of the Disease: A most evident Argument, that it is not necessary to know this, seeing it is sufficient not to be ignorant, whether the Disease begun by day or night, or evening, morning, or midday; because the computation of Days must be made, not beginning at the hour when the Disease came, but from the time, when the natural day does truly begin. And it is plain, that this was inviolably observed by him, because in reckoning up those things, which happened every day to the Sick, he reckoned the morning and evening in the same number, as one day only, not part of the day as the end of the preceding, and the other part as the beginning of the subsequent day; as the *Galenists* do. You may see this in the History of *Philiscus*, registred *1. Epid. n. 1.* where he says, that the third day in the Morning he seemed free from his Fever till Noon, in the Evening he had an Acute Fever, &c. We may observe the same in the History of *Epicrates* his Wife, and also of *Dromeas* his Wife, described in the same place: As also in the description of the Phrenitick Disease, of which *3. Epid. 5. 3.* and of the Servant in a Victualling-Houle, *lib. 4. v. 126*; and yet more clearly in the History of *Pinion*, *l. 3. f. 3. v. 134.* and in several others in *lib. Epid.*

Which Histories if these Men were to describe, they would divide every day into two parts, joining the former with the preceding day, and they would make the Evening the beginning of the day following: Which you nowhere find done by *Hippocrates*, who always ranked the Morning and the Evening in the same number, beginning the day always, as has been said, with the Sun-rising, and ending it with the Sun-setting. Will any of them say, that all *Hippocrates* his Patients began to be sick at Sun-rising, as he has begun the

the enumeration of his days from thence? Certainly this is ridiculous, since Experience shews, that Diseases do very seldom begin in the morning.

Since therefore *Hippocrates* never observed this division of days in his Enumeration, it is certain that the way of computing days by twenty four hours which *Galen* invented, and Posterity has followed, is a mere Figment, and to be rejected from *Hippocrates* his Doctrine: And that that way of computing must be observed, which *Hippocrates* followed, calling all that time, which is between the first coming of the Disease and the setting of the Sun, the first day, beginning the second, and all the rest from Sun-rising till the night following, according to the common custom, which usually makes it a day from the rising to the setting of the Sun.

Nor must we believe that *Hippocrates* in writing would have been so negligent in a matter of such moment, if the Computation must have been made different from the common custom, as not to have expressed it. Since therefore such was our Master's Enumeration of days in Diseases, upon which the whole Reason of Prediction and Cure is founded, though the true cause of it be not known, yet I will try to give as probable a Reason as I can, not departing from *Galen's* Principles, who 3. *de dieb. decretor.* endeavouring to give a Reason of Critical Days, reduced it to the passing of the Sun through the Signs of the Zodiack in Chronical Diseases, but in Acute Diseases, to the motion of the Moon. Now whether its Action proceeds from the Signs which it runs through by its proper motion: Or from the diversity of Light, which it receives from the Sun: Or from the concurrence of both, it is not our business to determine, since it is sufficient for us, to know that the changes of Acute Diseases do proceed from the motion of the Moon by Quaternaries and Septenaries.

But though upon account of the foresaid motion of the Moon, *Crisis* and other alterations of Diseases ought to be at certain set days and hours, when it touches this or that point; yet often the Rational time is missed, so that sometime it anticipates, sometime it postpones, and chiefly by reason of the Fits, which seldom coincide with the said motion of the Moon. For it is certain, that *Crisis* are made in the day of the greatest Fit, wherefore we see (which *Hippocrates* also observed) that those Diseases are judged on odd days which are moved on odd days; but on even days, when their Fits come on even days, and at a particular time of them: for in the beginning of the Fit Critical Excretions are made upwards: And what are made downwards or by Sweat, do come when the height of the Fit is over.

If therefore the peculiar time of the *Crisis* depend upon the variety of the Fits, the cause must be enquired of the Repetition of the Fits at certain set hours, because this same, with the foresaid motion of the Moon, will make both the *Crisis* and other alterations of

Diseases. And certainly this can be no other than the motion of the Sun which makes the day it self and measures it, while being rapt by the *Primum Mobile* from East to West in twenty four hours time, it views the whole World. For by means of this motion, not only day is distinguished from night, from the diversity whereof Human Bodies and all Sublunary things are variously affected, but also when it comes at the four Cardinal Points of the World, it produces an Alteration in these inferior things, answering in proportion to the four Seasons of the year, whence it comes to pass, that as in Spring Blood abounds most, in Summer Bile, in Autumn Melancholy, and in Winter Phlegm, so in the Morning Blood is naturally moved, at Noon Bile, in the Evening Melancholy, and at Night Phlegm, as is generally held by all Men. Wherefore since the beginning of a Fit is nothing but the beginning of the motion of the Humour, which peculiarly either causes or feeds the Disease, we must needs maintain, that that is the beginning and author of the Fits, from whence the beginning of the motion of the Morbifick Humour proceeds. For the reason, why the Fit, for example, of a Tertian Ague, returning every third day, comes at a determinate hour, is because the Sun, coming to the Meridian, disturbs the Bile, which is the Matter of a Tertian Ague, which when it is prepared to receive the Febrile heat, upon occasion of that agitation, it begins the Fit. And if the Fits of Tertians do not always come at Noon, nor turn at the same hour; for sometimes they anticipate, sometimes they postpone, it must be attributed to the inobedience of the Matter, because either by reason of its abundance, or of its quality, or of some mixture of another Humour, it either does not presently give way to the moving cause, or it is over hasty.

If therefore the time of the *Crisis* be governed by the time of the Fit, and the cause of the Fit be the foresaid motion of the Sun, as by it the Sun coming to such or such a Cardinal point of the World brings the Fit at this or that hour, it follows oftentimes, before the Moon come to that Point, by whose virtue the *Crisis* happens on this or that day, that the *Crisis* happens by virtue of the Sun, who measures and disposes the hour of the Fits, and by consequent the hour of the *Crisis*: So that it is not necessary to a *Crisis*, for example, which happens on the seventh day, that all the days should consist of full twenty four hours: Since it is sufficient when the Sun having been seven days above the Earth, has exercised its virtue upon the Humours, that the *Crisis*, or any other mutation may be said to be on the seventh day. Therefore, will some say, the *Crisis* will not be caused by the motion of the Moon, but rather of the Sun, if by virtue of the Sun a *Crisis* follow, before the Moon come at the place of the *Crisis*. I answer such, That for the *Crisis* to be made on this or that day depends on the motion of the Moon, who although she be not yet come to the exact point

point wherein the *Crisis* ought to be made; yet she has introduced before that time such a disposition into the Body and the Humours, that upon the approach of the action of the Sun a *Crisis* may be made.

Wherefore the virtue of the Sun is to raise a *Crisis* at this or that hour, but of the Moon, on this or that day: For the Stars do act upon these inferior things not all on a sudden; nor then only when they touch such a Point; but they begin to act much sooner at a certain distance, that is, when by their Orb or Ray they come near that Point, and so much the more effectually, by how much the nearer they approach to that Point, where their efficacy is strongest. Wherefore when the virtues of two Stars concur to one and the same Action, it is not necessary that the utmost virtues of them both, which consist in the Point of an Aspect (Astrologers call it a Partile) should concur, since the efficacy of one may be a cause, that some disposition introduced by the other, may be sufficient to produce the Effect. Whence it comes to pass, that the Action which proceeds from the Sun, does often produce a *Crisis* or some other Affection in the Body, though the Moon, which concurs to that Affection, be not yet arrived at the place on which its Action depends. And therefore, as I said but now, it is not necessary, that all the days should consist of full twenty four hours, as for Example, if one be taken sick about the twentieth hour, on Sunday, although the Moon before the fourteenth hour of the Saturday following come not to that point, which makes the beginning of the seventh day, which indeed is, when the Moon by his Ray or Orb is come to that place, which by a square Aspect respects that Point, in which she was at the time of the coming of the Disease, by virtue whereof *Crisis* and various Mutations in Diseases do happen; nevertheless by virtue of the Sun, which moves and makes brisk the Humours at some set hours, the effects of the seventh day begin at its rising: Since the disposition is sufficient,

which the Moon, approaching the place of Aspect, introduces into Mens Bodies: So that if the Disease be with a predominance of Blood, a *Crisis* may be made by Hemorrhogy even on Saturday morning at that hour when by virtue of the Sun the Blood is briskest and moves most.

Whenever therefore any one is taken with a Disease, while the Sun is above the Earth, we must compute all that time to the Sun-setting for the first day; because the Sun-setting ends the day and begins the night, which two things are quite contrary one to the other in virtue and nature. Whence it is, that whatever follows afterwards, has nothing to do with the former day, but belongs to the subsequent, of which that time is part. And this proceeds from the faculty of the Sun, which constantly exercises its virtues every day and finishes them, when it is come to the setting: and it begins to produce other effects, when it gives beginning to another day. And it appears from this, that if the day be like to be quiet, the night preceding is usually quiet; if the day be laborious, the night before is troublesome. Wherefore hence it may be argued, that in computation of nights the preceding must be reckoned to the day following. Although Hippocrates have not determined this matter, yet it is probable: for we are taught in *Genesis* that the night begins the day, when the Author says, *And the evening and the morning were the first day.*

I judge Critical days should be computed after Hippocrates his way, who means natural not artificial ones. If you reckon Galen's way, the *Crisis* will fall sometimes on the sixth, sometimes on the eighth: Therefore they err who follow him, and they often kill; as it happened to a famous Physician, who on the fourteenth day in the morning ordered Cupping-Glasses to be set to the shoulders with Scarification, and by that means he stopt a *Crisis* by Urine, which was just coming, upon which the Patient died on the one and twentieth day; because he checked the *Crisis* on the fourteenth.

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Thos. G. Hall
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